

**A STUDY OF COLLEGE ADMISSION OFFICERS' ATTITUDES AND
PERCEPTIONS ABOUT CYBER-CHARTER HIGH SCHOOL APPLICANTS**

by

David A. Barkovich

Bachelor of Arts, University of Pittsburgh, 1998

Master of Education, University of Pittsburgh, 2002

Submitted to the Graduate Faculty of
School of Education in partial fulfillment
of the requirements for the degree of
Doctor of Education

University of Pittsburgh

2014

UNIVERSITY OF PITTSBURGH

School of Education

This dissertation was presented

by

David Barkovich, M.Ed., NBCT

It was defended on

April 14, 2014

and approved by

William Bickel PhD, Professor, Administrative and Policy Studies

Mary Margaret Kerr EdD, Professor, Administrative and Policy Studies

Diane Kirk EdD, Clinical Associate Professor, Administrative and Policy Studies

Dissertation Advisor: Charlene Trovato PhD, Clinical Associate Professor,

Administrative and Policy Studies

Copyright © by David A. Barkovich

2014

A STUDY OF COLLEGE ADMISSION OFFICERS' ATTITUDES AND PERCEPTIONS ABOUT CYBER-CHARTER HIGH SCHOOL APPLICANTS

David A. Barkovich, M.Ed., NBCT

University of Pittsburgh, 2014

Admission officers at post-secondary institutions face the contemporary challenge of evaluating applicants who have chosen to attend online high schools. The rapidly increasing enrollment in online educational programs has drastically outpaced the research related to the outcomes associated with this decision. The goal of this quantitative study was to explore the attitudes and perceptions held by post-secondary admission counselors in the Commonwealth of Pennsylvania when reviewing cyber-charter high school applicants. This study also assessed the variations in admission procedures used for admitting applicants from cyber-charter high schools to post-secondary institutions. Finally, this study explored any relationships that may exist between the characteristics of the post-secondary institution and the attitudes and perceptions of an admission officer employed at this same institution about the cyber-charter school applicant.

The method of data collection was a structured survey distributed electronically to members of a professional organization of admission counselors in the Commonwealth of Pennsylvania. The convenience sample included two hundred and seven respondents who completed Likert-type rating scales and provided categorical demographic data. Cyber-charter school applicants were not found to be at a procedural disadvantage during the post-secondary admission process. However, the key finding of the study indicates that a considerable number of admission counselors do not believe that the cyber-charter

applicant will perform as well as a traditional high school applicant upon enrollment at the post-secondary level. The characteristics of a post-secondary institution were found to have little influence upon the admission counselor's attitudes. An unexpected finding from the categorical data collected from the respondents, many of whom possess less than five years of experience, indicated that nearly as many admission counselors make unilateral decisions as those who do so in an admission committee. The findings revealed that applicants to post-secondary institutions in the Commonwealth of Pennsylvania might face negative attitudes and perceptions during the admission process because of their choice to attend a cyber-charter school.

TABLE OF CONTENTS

PREFACE.....	XVI
1.0 INTRODUCTION.....	2
1.1 STATEMENT OF THE RESEARCH PROBLEM.....	4
1.1.1 Disciplinary Bases for this Study	4
1.1.2 General Terms as Defined by this Study.....	6
1.2 PURPOSES OF THE STUDY	9
1.2.1 Increasing Enrollment in Cyber-charter Schools	9
1.2.2 Discrimination Against Non-Traditional High School Graduates	11
1.2.2.1 Home Schooled Graduates and Discrimination.....	12
1.2.2.2 Discrimination by the Military	14
1.2.2.3 Implications of Non-Traditional Graduate Discrimination	15
1.3 RESEARCH QUESTIONS EXPLORED	16
1.4 STRENGTHS AND LIMITATIONS OF THE STUDY	16
1.4.1 Strengths	16
1.4.2 Limitations	17
2.0 REVIEW OF LITERATURE.....	19
2.1 WHAT IS SCHOOL CHOICE AND HOW IS IT DESCRIBED IN THE	
LITERATURE?.....	20

2.1.1	What are Charter Schools?	23
2.1.1.1	Charter School Organization.....	24
2.1.1.2	Charter Schools in Pennsylvania.....	27
2.1.1.3	Educational Innovation at Charter Schools	28
2.1.2	What are Cyber-Charter Schools?	29
2.1.2.1	Types of Cyber-Schools and Online Learning	31
2.1.2.2	Why Students Choose Cyber-Charter Schools	32
2.1.2.3	Cyber-Charter Schools in the Commonwealth of Pennsylvania.....	33
2.1.2.4	Cyber-Charter School Funding Sources In Pennsylvania..	35
2.2	WHAT DOES THE RESEARCH SAY ABOUT THE ACADEMIC ACHIEVEMENT OF STUDENTS FROM NON-TRADITIONAL SCHOOL CHOICE OPTIONS?	36
2.2.1	Variations in the Literature when Comparing Achievement Data from Charter and Cyber-Charter Schools to Traditional Public Schools	37
2.2.2	General Findings Supporting Cyber-Charter Learning	40
2.2.3	General Findings Challenging Cyber-Charter Learning	42
2.2.4	Charter School Achievement Data Comparisons	42
2.2.4.1	National Charter Achievement Data	43
2.2.4.2	Commonwealth of Pennsylvania Charter School Achievement Data	44
2.2.4.3	Pennsylvania Cyber-Charter Achievement Data	46

2.3	WHAT DOES THE RESEARCH SAY ABOUT THE UNDERGRADUATE COLLEGE APPLICATION PRACTICES OF STUDENTS FROM NON-TRADITIONAL SCHOOL CHOICE OPTIONS?	47
2.3.1	College Admissions Overview	48
2.3.1.1	The College Admission/Enrollment Officer	50
2.3.1.2	Student Grade Data As Used in College Admissions	51
2.3.1.3	Standardized Testing As Used in College Admissions	52
2.3.1.4	Other Admission Criteria Used in College Admissions	52
2.3.1.5	Electronic Proficiency and Maturity as Related to the Admission Process	53
2.3.2	Career and College Counseling for Non-Traditional High School Students.....	55
2.3.2.1	Career and College Counseling and Home schooled Students	55
2.3.2.2	Career and College Counseling and Charter High School Students	56
2.3.2.3	Career and College Counseling and Cyber-Charter High Schools	57
2.3.3	The College Admission Practices of Non-Traditional High School Students.....	58
3.0	RESEARCH METHODS.....	60
3.1	RATIONALE.....	60
3.2	CONCEPTUAL FRAMEWORK	62

3.3	RESEARCH QUESTIONS.....	64
3.4	DESIGN OF THE STUDY	65
3.4.1	Development of the Survey Instrument	65
3.4.2	Identification of the Research Subjects.....	67
3.4.3	Collection of the Data.....	68
3.5	DATA ANALYSIS.....	69
3.6	VALIDITY AND RELIABILITY	73
3.7	ETHICAL CONSIDERATIONS	74
4.0	RESULTS	76
4.1	INTRODUCTION	76
4.2	FINDINGS.....	77
4.2.1	Contextual Findings	78
4.2.2	Findings Relating to Research Question 1: Differences in Admission Procedures	82
4.2.3	Findings Related to Research Question 2: Attitudes and Perceptions of Admission Counselors	83
4.2.4	Findings Related to Research Question 3: Characteristics of Institutions	86
4.2.5	Findings Summary	89
5.0	CONCLUSIONS	90
5.1	INTRODUCTION	90
5.2	IMPLICATIONS	90

5.2.1 Research Question 1 Implications: High Degree of Consistency Found in Admission Processes Despite Applicant’s High School of Origin	91
5.2.2 Research Question 2 Implications: Negative Perceptions of Cyber-Charter Applicants	93
5.2.3 Research Question 3 Implications: Negative Perceptions Not Related to Institution’s Characteristics	97
5.3 LIMITATIONS.....	99
5.4 RECOMMENDATIONS FOR FUTURE RESEARCH	99
5.5 PERSONAL REFLECTIONS.....	101
APPENDIX A	103
APPENDIX B	104
APPENDIX C	107
APPENDIX D	117
BIBLIOGRAPHY	137

LIST OF TABLES

Table 1. Public Charter School Authorizers by State, 2008-2009	27
Table 2. Cyber-Charter Schools in PA in 2012-13	34
Table 3. Charter School Diversity in the Commonwealth of Pennsylvania in 2011-12...	40
Table 4. Commonwealth of PA Charter School 2010-11 PSSA Recalculations	45
Table 5. Cyber-Charter School Progress in 2009-12	46
Table 6. Cyber-Charter 2010-11 PSSA Score Recalculations.....	47
Table 7. Ratio of Admission Applications to Admission Counselors in 2010	51
Table 8. Online College Application Submissions 2006-2010.....	54
Table 9. Average Standardized College Admission Test Scores for 2012	58
Table 10. Formation of Conceptual Frameworks	63
Table 11. Formation of Research Questions	64
Table 12. Formation of Survey Questions	66
Table 13. Proposed Data Analysis Methods	71
Table 14. Survey Question Response Rate	77
Table 15. Raw Survey Data: Question 1	117
Table 16. Raw Survey Data: Question 2.....	117
Table 17. Raw Survey Data: Question 3.....	117
Table 18. Raw Survey Data: Question 4-Setting	117

Table 19. Raw Survey Data: Question 4-Institution Size	118
Table 20. Raw Survey Data: Question 4-Institution Selectivity	118
Table 21. Raw Survey Data: Question 5.....	118
Table 22. Raw Survey Data Question 4-Affiliation.....	118
Table 23. Raw Survey Data: Question 6.....	119
Table 24. Raw Survey Data: Question 7.....	119
Table 25. Raw Survey Data: Question 8.....	119
Table 26. Raw Survey Data: Question 9–Overall Success Expectations	119
Table 27. Raw Survey Data: Question 9-GPA Expectations.....	120
Table 28. Raw Survey Data: Question 9-Retention Rate Expectations.....	120
Table 29. Raw Survey Data: Question 9-Social Coping Expectations	120
Table 30. Data Comparison-Question 4-6 and Question 9: Overall Expectation for Success	122
Table 31. Data Comparison: Questions 4-6 and Question 9: GPA Expectations	123
Table 32. Data Comparison: Questions 4-6 and Question 9: Retention	124
Table 33. Data Comparison: Question 4-6 and Question 9-Social Coping	125
Table 34. Observed vs. Expected Counts Between Institution Location and Expectation for Overall Success of Cyber-Charter Applicants	126
Table 35. Observed vs. Expected Counts Between Institution Location and Expectations for GPA of Cyber-Charter Applicants	126
Table 36. Observed vs. Expected Counts Between Institution Location and Freshmen Retention Expectations of Cyber-Charter Applicants.....	127

Table 37. Observed vs. Expected Counts Between Institution Location and Expectations for Social Coping of Cyber-Charter Students	127
Table 38. Observed vs. Expected Counts Between Institution Size and Expectations for Overall Success of Cyber-Charter Applicants	128
Table 39. Observed vs. Expected Counts Between Institution Size and GPA Expectations for Cyber-Charter Applicants	128
Table 40. Observed vs. Expected Counts Between Institution Size and Retention Expectations for Cyber-Charter Applicants.....	129
Table 41. Observed vs. Expected Counts Between Institution Size and Social Coping Expectations for Cyber-Charter Applicants.....	129
Table 42. Observed vs. Expected Counts Between Institution Affiliation and Expectations for Overall Success of Cyber-Charter Applicants	130
Table 43. Observed vs. Expected Counts Between Institution Affiliation and GPA Expectations for Cyber-Charter Applicants.....	130
Table 44. Observed vs. Expected Counts Between Institution Affiliation and Retention Expectations for Cyber-Charter Applicants.....	131
Table 45. Observed vs. Expected Counts Between Institution Affiliation and Social Coping Expectations for Cyber-Charter Applicants.....	131
Table 46. Observed vs. Expected Counts Between Institution Selectivity and Expectations for Overall Success of Cyber-Charter Applicants.....	132
Table 47. Observed vs. Expected Counts Between Institution Selectivity and GPA Expectations for Cyber-Charter Applicants.....	132

Table 48. Observed vs. Expected Counts Between Institution Selectivity and Retention Expectations for Cyber-Charter Applicant	133
Table 49. Observed vs. Expected Counts Between Institution Selectivity and Social Coping Expectations for Cyber-Charter Applicants	133
Table 50. Observed vs. Expected Counts Between Degree Programs Offered by Institutions and Expectations for Overall Success of Cyber-Charter Applicants	134
Table 51. Observed vs. Expected Counts Between Degree Programs Offered By an Institution and GPA Expectations for Cyber-Charter Applicants.....	135
Table 52. Observed vs. Expected Counts Between Degree Programs Offered at Institution and Retention Expectations for Cyber-Charter Applicants	135
Table 53. Observed vs. Expected Counts Between Degree Programs Offered at an Institution and Social Coping Expectations for Cyber-Charter Applicants.....	136

LIST OF FIGURES

Figure 1. Example of Common Charter School Organizational 26

Figure 2. Admission Requirements from Most to Least Important 49

Figure 3. Preferred Job Experience for Admission Officers..... 50

Figure 4. Survey Data: Question 2..... 79

Figure 5. Survey Data: Question 3..... 80

Figure 6. Survey Data: Question 6..... 81

Figure 7. Survey Data-Questions 7 and 8 83

PREFACE

I am blessed to have many supportive individuals in my life and this research would not have been possible without their love, advice, and encouragement. I must start out by thanking my wife Natalie for her patience, her understanding, and her keen editing skills. She has encouraged me each step of the way and has always understood why I wished to pursue this goal, even when I became confused myself. She truly is my “density.”

While she doesn’t quite understand it yet, I want to thank my daughter Gwendolyn. I began my research and writing in earnest during her naptimes in the first several weeks after she was born and continued it throughout the first 5 years of her life. Gwen: I hope you will understand why Daddy had to be on the computer so much when the college tuition bills arrive in 13 years.

I cannot thank my family, especially my parents, enough for their support. I doubt I would have reached this point if you had not provided me with such wonderful role models. Thank you for instilling in me a love of reading and a thirst for adventure. I am blessed to have the Schafers as my in-laws and to have exceptional siblings like the Julie, Jonathon, Joe, Jessica, Emily, Brett, Melissa, Matt, Brad, and Maura.

I do have to thank my friends Dan, Ken, and Kevin. You have stuck with me through thick and thin for over 25 years. “You have been, and always shall be, my friends.”

I want to thank the administration, faculty, and the staff of the North Hills School District. You supported my endeavors each step of the way. I want to especially thank Daria, Maryssa, Deb, Nicole, Kathy, Jason, Tim, Joan, John, Ryan, Bill, Johannah, and Pat for their support and patience with this often-grumpy curmudgeon.

It is very important to recognize the cooperation of the Pennsylvania Association of College Admission Counselors (PACAC) in providing access to their membership in order to conduct the research survey. Thank you for assisting me with adding to the body of research related to college admissions.

I would like to express my deepest appreciation and thanks to my advisor, Dr. Charlene Trovato, and to my committee members: Dr. Mary Margaret Kerr, Dr. Diane Kirk, and Dr. Bickel. Your experience, patience, and advice were vital to my research and personal education. I am in your debt.

1.0 INTRODUCTION

Virtually every aspect of the American K-12 educational system is under the scrutiny of parents, students, taxpayers, and policymakers, particularly so in recent years as the substantial increases in domestic spending for education in the United States of America are not producing the expected improvements in student achievement and test scores. As such, it is becoming increasingly popular for students and parents to investigate alternate educational options. “School choice” options, which can include home schooling, charter schools, and cyber-charter schools, have become much more frequently examined options and are now considered by many to be legitimate substitutes for the conventionally recognized public education experience that is available from a student’s local “brick and mortar” school. These school choice options represent a major systematic reform of the conventional structures of K-12 schooling as they present drastically different methods through which a student might perform many of the long established and standardized tasks that are usually associated with K-12 schooling, including what many consider to be the most significant: the exemption from attending an actual school building on a daily basis. The rapidly increasing creation of and increasing student enrollment into these school choice options is a hotly debated topic. The new options for earning a high school diploma can act in direct competition to the established K-12 school system and have quickly become a threat, in both enrollment and financial terms, to traditional public education. This is especially true as more school choice options are utilizing the rapidly advancing

electronic technology and software programs and applying them to develop new platforms for providing an education for K-12 students.

The increasing popularity of these school choice options can create confusion not only for the educational consumers who are actively examining these newly available K-12 schooling alternatives, but it also creates concerns for the other institutions and organizations that inevitably encounter the graduates of these different options. Post-secondary institutions (colleges, graduate and doctoral programs, community colleges, career training schools), employers, and even branches of the military face the contemporary challenge of evaluating and interpreting the legitimacy of the greater variety of 21st century high school diploma options. Educational institutions, businesses and other organizations must now make enrollment and hiring decisions that involving a new breed of applicant, adding to the already difficult task of considering the reputations and diplomas earned by the applicants, future employees, or recruits that have attended the thousands of established traditional public schools across the nation. This study explores the negative perceptions that applicants who have chosen one such non-traditional high school diploma method (cyber-charter high school education) might encounter when they choose a specific but very common post-secondary educational path (the post-secondary college admissions process).

This is an especially relevant topic to this researcher as it relates very closely to his employment as a full-time high school counselor. This work frequently brings him into contact with teenagers facing major educational decisions, including the selection of high school coursework (online or in the standard classroom environment?) as well as the decision whether or not to pursue higher education. His previous professional experience as a college admission and financial aid counselor provides him with a framework in understanding the admission

process from the post-secondary institution's viewpoint. Additionally, his current supplementary employment at a public high school as an online teacher in his school's own cyber-school provides him with a lens for understanding teaching and learning in an online environment.

1.1 STATEMENT OF THE RESEARCH PROBLEM

1.1.1 Disciplinary Bases for this Study

The field of education, including both the K-12 and post-secondary levels, is the primary disciplinary base for this study with the major concepts being the high school diploma and the college admission process. The range of paths described by the term "college admissions" involves a vast variety of post-high school options, but all are interconnected to the broad field of scholastic endeavors.

Another disciplinary base related to the topic of this study is the field of social sciences, especially psychology as it relates to the examination of human behavior in the marketplace of educational consumer choices. First, the reputation that an entity such as an educational institution develops and the way that it is socially evaluated may not always be rooted in strict scientific method and can be generated in large part from an individual's own thoughts and experiences. Purposefully influencing the public perception of a school system towards a positive opinion can occur via special programming and events, the Internet, promotional videos, websites, and both traditional and social media. The traits and characteristics of a school system are used in these mediums to create the positive reputations for that school system and the surrounding community. The marketing and branding of an educational institution can occur by

using the academic curriculum, athletics and school activities, college admission rates, job placement percentages, student accomplishments, and even the school grounds themselves.

A second way in which psychology relates directly to this study involves the common occurrence of admission officers personally traveling to recruit students from high school buildings. While rankings of and comparisons of high schools across the United States are conducted annually based on a variety of quantitative data (test scores on a state's achievement tests, average SAT or ACT scores of a high school's graduates, percentage of economically disadvantaged students, etc.), the creation of an admission officers' own personal concept of a particular institution may also be the result of unofficial factors relating to the visit such as the warmth of the welcome the admission officer received upon his arrival, the general cleanliness of the school, the number of and attentiveness of the students present during his visit, and possibly even whether he was offered any refreshments. These admission representatives may also be the same professionals who will evaluate the student's application materials during the admission process. It is possible their own subjective experiences during that visit may contribute to the internal process of creating an impression of and affect the way in which they perceive a high school and its applicants. A unique challenge exists as it relates to considering the particular type of high school examined in this study: the cyber-charter high school. Because there is usually not an actual building for the admission officer to have visited in the past (therefore creating an impression of the school and its enrollees), the lack of a tactile and first-hand experience at the school itself may be a factor and could possibly create a negative perception during the admission process.

1.1.2 General Terms as Defined by this Study

Aside from the terms specifically explored in the review of the literature, the following terms and operational definitions were used for the purposes of this study:

- **Academic Program:** A scholastic program leading to an associate, bachelors, masters, or post-graduate degree that results in academic credits that can be used towards a degree.
- **Accrediting agencies:** Bodies or organizations that operate under established standards for professional or educational programs or institutions. Accrediting agencies determine whether these standards are being met at a particular institution and formally announce their findings.
- **Admission(s):** When an applicant has been issued an official offer to attend a post-secondary institution.
- **Admission officers:** Post-secondary officials tasked with reviewing application data, as set by each institution, in order to determine whether a student will be accepted or not. This term can be used synonymously with “enrollment officers.”
- **Admission test scores:** Standardized test scores such as the SAT, ACT, and TOEFL that are used as a factor when determining whether a student will be admitted.
- **Alternate high school diploma:** A high school diploma or its equivalent that is granted by an institution other than a regionally accredited brick and mortar high school. This might include, but it is not limited to: a General Educational Development (GED) certificate, graduation through an exit exam, a waiver for hardship, evidence-based waivers, and collections of evidence to issue a diploma.
- **Applicant:** An individual who has met an institution’s requirements for consideration for

an admissions review.

- Asynchronous learning/communication: Communication, including educationally related communication, in which the student is not required to interact with another person or teacher at a specific time of the day (Examples: e-mail, online message boards)
- Blended Learning: A mix of online and face-to-face education in which the learner is supervised part-time in a location other than the home and part time through an online environment. This is typically done to provide more oversight of learning progress.
- Blog: An online journal. A contraction of the words: “web log.”
- Brick and mortar school: A physical school building and environment. This term is usually used in opposition to a virtual or cyber-based education.
- Distance Learning: Education that is delivered remotely (Examples: online learning, video-conferencing, correspondence courses).
- Degree: A recognized award granted by a college, university, or other post-secondary institution after the successful completion of an established program of formal studies.
- Enrollment officers: Post-secondary officials tasked with reviewing application data, as determined by each institution, to determine whether a student will be accepted or not. This term is used synonymously with “admission officers.”
- Face-to-face instruction: Learning and instruction between students and teachers that occurs physically at a location.
- Four-year institution: A post-secondary institution such as a college or university that offers at least a baccalaureate degree or certificate. These are usually recognized by an accrediting agency.

- Online learning: Educational courses delivered through the Internet either synchronously or asynchronously (Berge & Clark, 2005). The term virtual learning is used synonymously.
- Pedagogy: Instructional practices or strategies in the classroom.
- Non-traditional high school diploma: An alternative to the traditional high school diploma as approved by the state. Also referred to as a “alternative high school diploma.”
- Non-traditional graduates: A hotly contested term that can be used to describe a graduate of a high school program other than a traditional high school. This might include, but it is not limited to a cyber-school, a GED (General Educational Development) certificate, graduation through an exit exam, and a waiver for hardship, evidence-based waivers, and collections of evidence to issue a diploma.
- Social Coping: The ability of an individual to process and resolve stresses that result from social situations.
- Synchronous learning/communications: Education or communication in which the student is required to interact with the teacher during a certain time of the day (Examples: classrooms, face-to-face meetings, telephone calls, videoconferences).
- Special Focus Institution: Institutions awarding degrees where a high concentration is in a single field or in highly related fields.
- Transcript: The academic record that a student accumulates while attending an institution. This record is usually compiled to represent a certain set time period of study, most commonly the high school, undergraduate, or even post-graduate level.
- Tribal College: Institutions that are members of the American Indian Higher Education Consortium

1.2 PURPOSES OF THE STUDY

The purpose of this study is to examine whether the admission officers at post-secondary institutions in the Commonwealth of Pennsylvania have different admission policies/practices for applicants from cyber-charter high schools. The secondary but no less important question will be to determine if these admission or enrollment officers have different perceptions of cyber-charter applicants and what factors might contribute to these attitudes. Major factors in choosing this topic are the increasing enrollment in cyber-charter schools, instances of past discrimination against non-traditional high school applicants, and a gap in the literature related to cyber-school attendance and the college admissions process.

1.2.1 Increasing Enrollment in Cyber-charter Schools

The number of online learning opportunities and high school diploma programs has significantly increased in the last two decades for students in grades ranging from kindergarten to the twelfth grade. Estimations of K-12 online learners in 2000-2001 placed the enrollment nationally at 40-50,000 students (Clark, 2000) while just a year later The Peak Group (2002) placed the number at 180,000. A formal survey soon afterwards by Newman, Stein, and Trask (2003) obtained data from 88 online learning providers and indicated that 300,000 students were enrolled. Hughes, McLeod, Brown, Maeda, and Choi (2005) estimated that of the number of online learners increased in 2005 from 520,000 and data from Picciano and Seamon (2006) indicated that 700,000 students were enrolled in public charter schools or in similar online offerings. When these researchers conducted similar investigations in 2008, over 1 million students (a 21.3% increase) were enrolled (Picciano & Seamon, 2009) in online K-12 institutions. More recent data

puts the enrollment in online high school institutions at 6.7 million students in the United States (Allen & Seamon, 2013).

Smith found in 2005 that 1% of American K-12 students have taken an online course, but most did so while concurrently enrolled in a traditional public high school. Several years later, forty of 50 states reported (Watson & Ryan, 2008) that they formally recognized online/cyber institutions that were offering online classes, but Watson, Murin, Vashaw, Gemin, and Rapp (2011) have now found that this option is available in all fifty states as well as the District of Columbia. It is essential to note that these findings indicate that the majority of the online learning is via blended programming and not full time online learning. In the United States, blended learning in which classes are taken in both an online environment and a physical school building (as opposed to a student spending 100% of their educational time in an online environment) is the fastest growing subdivision of online learning (Watson et al., 2011).

The significance that virtual or cyber school programming is having in on educational policy innovation is evident (Tucker, 2007), especially to the public schools that are losing students and the school districts that are largely responsible for funding the cyber schools. It is not surprising, therefore, that the creation of single school district online programs, in which a public school district offers its own internal online programing for its own students, are now outpacing the private sector of online learning institutions (Watson, Murin, Vashaw, Gemin, & Rapp, 2011). This appears to be evidence of how public school districts, via their own internal online programs, are responding to the marketplace of opportunities that other non-public virtual schools (cyber-charter) might offer to students. While online learning opportunities may have been originally created to assist with the geographical challenges created by very large school districts, the reclamation of funds that are currently paid to charter schools when a district

resident chooses an online school outside their system would certainly seem to be another reason for this growth, as well.

1.2.2 Discrimination Against Non-Traditional High School Graduates

Students applying for entrance to a post-secondary institution are required to meet the admission criteria set by each institution or organization in which they wish to enroll. Some institutions may be part of larger entities (including large university systems with numerous campuses, trade unions with local chapters in each area, and branches of the military) that have established general standards across their extensive organizations. In most cases the applicants will still face individualized criteria for each location or branch as set by each institution rather than a local or state governing board.

However, there has been a recent new addition to the factors considered in the post-secondary admission process. Each individual post-secondary institution has not only considered the applicant's qualifications, but also the reputation of the high school from which the applicant is matriculating. In the 21st century, colleges now endeavor to interpret the credentials of an increasingly varied type of non-traditional institution that grants high school diplomas, including a growing number of charter and cyber-charter high schools. There is precedence for such an occurrence previously as the latter part of the 20th century (Shea, 1996) brought great waves of college applications from home schooled students, who also possess different and non-traditional types of academic credentials, to the post-secondary level.

1.2.2.1 Home Schooled Graduates and Discrimination

The number of students graduating from high school via home schooling grew in the 1990s and obstacles emerged when they began applying to colleges and universities. In the decade prior, a landmark ruling in *Leeper vs. Arlington Independent School District* (1987) allowed home schools in Texas to be recognized as non-accredited private schools for legal purposes. But while this ruling may have eliminated some legal barriers for simply being eligible to submit an application for admission to college, the prejudices that existed in the admission review were not totally eliminated (Richardson & Zirkel, 1997). In 1996, the home schooled population had reached almost 1.6 million students (Lines, 1996), but discrimination against these non-traditional high school graduates by post-secondary institutions was occurring to such a great degree that it required an act of Congress to permit these students to simply access even a basic part of post-secondary education such the federal student financial aid system (Kurzman, 2008). A significant victory for the homeschooled population was achieved in 1998 when the Higher Education Act of 1965 was amended. This prohibited a post-secondary institution that received federal aid from requiring that homeschooled students take an additional admission test, such as a GED, that would not have been required of an applicant from a traditional school. The admission process for home schooled students was further complicated by a requirement that this applicant population complete the content-based SAT II exams in addition to the SAT exam (AACRAO, 1999), although the Reauthorization of Higher Education Act recommended that this be halted (Home School Legal Defense Association, 2006). Oddly enough, this prejudice against home schoolers was manifesting itself during this time despite a significant contemporary (at that time) body of evidence that home schooled students were shown to outperform their peers attending the traditional K-12 public schools at almost every grade level and on a number of

nationally recognized exams, including the Iowa Tests of Basic Skills and the Stanford Achievement Test (Frost, 1987; Rakestraw, 1987; Ray, 1990; Rudner, 1999; Wartes, 1990;). In 2012, over 2.04 million students were schooled in their homes (National Center for Educational Statistics, 2012).

Home schooled students who have sought admission to colleges in the past have found that some institutions may have clear policies against accepting students from non-accredited high school or with a non-traditional diploma. These guidelines might dissuade a student from applying (Jones & Gloeckner, 2004), but a real concern existed in the cases when a school did not explicitly state a prejudice against home schoolers. A great fear of families choosing to home school still to this day is that the college's enrollment or admission office, and the admission professionals that are responsible for reviewing the student's materials during application, might instead have an unstated or privately held attitude towards home schooled students. The most common reason for this might be that the record keeping typically conducted by home-school parents does not usually conform to the typical high school transcript that an enrollment official might use to review during the admission process. Grades submitted by parents might be seen as subjective and aspersions can be cast upon the teaching proficiency and education of many home-schooling parents (Clark, 1997). Other research indicated problems that parents (as teachers of home school students) have with providing an accurate assessment of their home schooled student's academic progress as compared to peers of the same grade level (Simmons, 1992). Since these families do not have a larger context for academic evaluation, it is possible for parents to have difficulty subjectively and accurately conducting a systematic and objective evaluation of their child's achievement.

Research from the last decade (Jones & Gloeckner, 2004) indicated that while nearly 75% of post-secondary institutions have official home schooled student admission policies, only 35% of colleges and universities expect these students to cope socially at their eventual post-secondary institutions in comparison to their traditionally enrolled peers. Findings such as this regarding home schooling, may be troublesome to parents of home-schooled students and to families choosing other school choice options. Investigating whether similar attitudes and perceptions might exist in the college admission process against applicants from cyber-charter high schools is a main concern of this study.

1.2.2.2 Discrimination by the Military

Pursuing further education after high school is certainly not the only possible career path for a graduate. While the importance of having an educated populace would seem paramount to a successful society, the safety and security of the nation is arguably an equal or greater concern. As such, the creation of and maintenance of an effective military is a priority of the government. The growing influx of applicants from those with alternate high school diplomas has also presented new challenges for evaluating military recruits. A Department of Defense pilot study of home-schooled graduates indicated “the single best predictor of an individual’s likelihood of adapting to the military is a traditional high school diploma (GoArmy.com, 2012).” Supporting this idea are findings that higher than average attrition rates exist in the United States military from those with alternate diplomas. Specifically, 39% of recruits who had earned a non-traditional diploma leave the military before they have finished three years of service as opposed to 29% of recruits from traditional high schools (2012). This may also be why the United States military currently limits the number of recruits enrolled from non-traditional high school diploma programs each year depending on the standards of each branch (Estrada, 2013).

Until recently, the United States military even classified non-traditional diplomas into a lower tier than a traditional high school diploma. Recent revisions to the previous classifications placed charter and cyber-charter school diplomas into the same tier (Tier 1) as traditional diplomas, but only if the student scores a minimum score (50) on the ASVAB exam (National Defense Reauthorization Act, 2012). Recent downsizing within branches of the military could mean that the type of high school education a student has chosen may still affect an interested military recruit.

1.2.2.3 Implications of Non-Traditional Graduate Discrimination

This research provides evidence that past graduates of non-traditional high school options have faced prejudices from several career and college options. The skepticism and doubt that was initially faced by the home schooled applicants during the college application process seems to have abated with time as findings have revealed the comparable performance of these students to traditional high school graduates during studies at the college level (Jones & Gloeckner, 2004). Home-schooled graduate may face a similar challenge when interested in a military career as the military has also adjusted their practices. However, no research currently exists in the literature concerning how post-secondary institutions should interpret and assess the increasingly frequent influx of admission applications from another non-traditional high school diploma program, the cyber-charter high schools.

1.3 RESEARCH QUESTIONS EXPLORED

In order to properly understand the context for exploring the perceptions and attitudes of admission and enrollment officers about cyber-charter applicants, the following questions needed to be explored:

1. What is school choice and how is it described in the literature? In particular, the definition and organization of cyber-charter schools were examined.
2. What does the research state about the academic achievement of students from charter schools and cyber-charter schools? This was done in order to determine if there would be any achievement data that might lead admission/enrollment officers to discriminate for/against cyber-charter students.
3. What does the research state about the college application practices of charter school and cyber-charter school students? In particular, an exploration into any limitations to the cyber-charter population accessing post-secondary options will be conducted.

1.4 STRENGTHS AND LIMITATIONS OF THE STUDY

1.4.1 Strengths

The first strength of this study is that it addresses the gap in the literature that exists on the contemporary topic of applicants from cyber-schools and how they are viewed during the admission process for post-secondary education. This gap is largely due to the very rapid growth in the number of cyber institutions and associated swelling number of graduates from these

programs. Advances in technology and the creation of these educational programs seems to have outpaced the research, although the longitudinal nature of examining student successes over the length of time needed to gain high school equivalence (typically four years during grades 9 to 12) complicate examining up-to-date data. Additional information may inform the practice of students, parents, K-12 educators, post-secondary institutions, and possibly even legislation related to cyber-charter funding.

Secondly, this study gave the survey respondents an opportunity to reflect upon their personal opinions, their institution's particular practices, and the relationship that might or might not exist with applicants from cyber-charter schools. The possibility exists that contemplation of current practice could have informed, strengthened, or changed policies that may have previously existed.

Finally, this study allowed the researcher to develop professionally. With previous experience as a college admission officer and now current employment as both a high school counselor and online teacher, great conflict and confusion existed for the researcher on these issues. This study contributed greatly to his professional development and his ability to advise educational consumers on their options for pursuing a high school education.

1.4.2 Limitations

A number of limitations to this study exist. The first is that little research happens to be available on the effects of choosing online learning or on attending cyber-charter schools. There is some research in this area relating to the pedagogical methods used during online learning as opposed to the traditional classroom, but it appears that there is a need to move beyond comparative studies and to examine factors such as successful teaching and learning (Rice, 2006). Progress in

this area seems to have outpaced the research as enrollment of cyber-charter schools continues to grow with very little research supporting whether there are real benefits to making this important choice.

Another limitation exists relating to the institutions that have been sampled. While over 1000 admission and enrollment officers are members of PACAC (Pennsylvania Association of College Admission Counselors, 2013), not every institution of higher learning in the Commonwealth of Pennsylvania is a member of this organization. Therefore, the admission policies and perceptions of admission representatives at PA colleges who are not members are not represented in the sample. Additionally, the confinement of the sample to just this one state represents just part of the almost 5,000 different post-secondary schools across the United States of America (The College Board, 2013).

2.0 REVIEW OF LITERATURE

The intent of this chapter is to research, define, and examine the existing research and any associated empirical evidence in order to answer the following questions:

4. What is school choice and how is it described in the literature? In particular, charter and cyber-charter school definitions were examined.
5. What does the research state about the academic achievement of students from cyber-charter schools?
6. What does the research state about the college application practices of cyber-charter school students? In particular, an explanation regarding any limitations to the cyber-charter school population accessing post-secondary options will be explored.

This review of literature provided a framework for a study in which the perceptions and attitudes of admission and enrollment officers toward cyber-charter high school applicants were examined. Several types of literature were selected for this review, including articles from peer-reviewed journals, published and unpublished dissertations, books, and meta-analytic reviews of earlier studies. A systematic search of the available research was conducted on the topics that related to school choice, charter schools and cyber-charter schools organization and achievement, non-traditional high school degrees, and college admission practices for applicants from non-traditional diploma programs. In addition to the research resources of the National

Association of College Admission Counselors (NACAC), a number of education related databases were used to search and review the previously mentioned keywords. Research techniques involved a variety of Boolean searches with assistance from the University of Pittsburgh Library Sciences department, cross-references of bibliographies, and research via ProQuest Theses and Dissertations.

2.1 WHAT IS SCHOOL CHOICE AND HOW IS IT DESCRIBED IN THE LITERATURE?

Generally constructed upon the idea of the economical free market, the concept of school choice describes a situation in which consumers (parents and/or students) can evaluate whether a product (educational opportunity) is providing the best option for their particular circumstances. Chubb and Moe (1990) were the first to popularize and campaign for the educational reform known as school choice in *Politics, Markets and American Schools*. Their proposed system of choice would allow each school to exercise “sole authority to determine its own governing structure” (1990).

Supporters of school choice generally contend that providing families with the option to choose better matches for their children will enhance the student’s learning while the opponents tend to tout fears such as social opportunity limitations, lower achievement scores in school choice schools, the economic drain to public resources, an increase in class segregation, and benefits for more advantaged students. Public schools do seem to be scrambling to adjust their techniques and educational approaches at every level in order to respond more competitively to what works best for students and there is research to suggest they can respond positively to

incentives and consequences in much the same way as businesses and individuals (Gray, 2012). There is growing evidence that competition from school choice could trigger widespread positive reform in the public school system (Center for Education Reform, 2002).

The concept of school choice implies increased educational options, but choosing a different option may not completely eliminate all troubles that a student might be facing. While some school choice options may provide more attractive options to families, some of the traditional challenges such as transportation and mobility may still exist and create constraints to a family's school choice options. In many cases, the options could be limited to the educational entities that physically exist within the very same school district where the family unit actually resides. This is especially true for charter schools as transportation policies often adhere to the limits on jurisdictions established by local and state boundaries.

Socio-economic factors are frequently involved when discussing school choice. It can be difficult to consider how a topic such as segregation might relate to this issue, but a de facto "suburban veto" (Ryan & Heise, 2002) of school choice exists when many well-financed school districts are located near or adjacent to less well off urban areas. The failure of many large urban public schools to achieve at a desired level may leave parents with few other choices than charter schools (Education Week, 2002). Less well off parents may not be able to purchase a new residence located in a neighboring community which might have a better school (Greene, 2000; Witte, 1999), be it public, charter, or otherwise. This has created a societal perception and identification of school choice as being associated with poorer urban areas and school districts. The association of school choice with urban areas becomes even more controversial when the demographical make-up of the urban districts in the United States is considered, suggesting an aspect to the educational choices that are skewed against students who might come from low-income families

as well as minority students. School choice has the possibility to “pit student against student and family against family in the struggle for educational survival” (Cookson, 1992) as a family’s economic situation may determine whether they have better mobility to remove themselves from failing schools. A downward spiral of enrollment and funding can occur when an already struggling school system loses per-pupil funding when parents examine their options and then choose another educational placement. This is a very significant effect of school choice as those schools most affected by the loss of financial support were most likely already those schools that were struggling economically and failing to meet state required minimums for standardized testing.

School choice legislation and court challenges concerning school choice have been debated and ruled upon at the highest level of the government in the last decade. The “No Child Left Behind Act” made school choice into federal law by making it possible for families with a child attending a school branded as “in need of improvement” to relocate their child to a different (and presumably better-performing) school (No Child Left Behind [NCLB], 2002). The U.S. Supreme Court issued a landmark ruling in June 2002 by stating that a voucher program instituted by the Cleveland Department of Education was not in violation of a government establishment or endorsement of religion in *Zelman v. Simmons-Harris* (2002). Rather than be bound to a failing school by their geographic area and possibly by their own economic situation, parents in this district were able to use a “voucher” worth a certain amount of money to defray the cost of having their child attend a school of their choosing.

The primary focus of this research will be cyber-charter schools, although different variations of “school choice” exist in the forms of physical charter schools, homeschooling and both inter-and intra-public school transfers. These final two possess very different characteristics

than the charter/cyber-charter options as the inter- and intra-school transfers still involve enrollment in the public school system, although with the provision that the student has the ability to move between schools in the same district (inter-school) and to schools in other nearby school systems (intra-district). Home schooling is a completely separate educational option that occurs in the student's home with the parent/guardian in the role of the teacher. Research into the cyber-school option has been challenging as these entities have not been discussed or researched at the same depth as the other school choice options. This seems to be largely due to the relatively recent incorporation of cyber-charters into the educational marketplace.

2.1.1 What are Charter Schools?

Charter schools came into existence in order to meet the public's demand for high academic performance on both the local and national scale. In an era that demands increased accountability from every level of education and government, public schools across the nation are required to continually demonstrate how they are going to meet the external demands and expectations placed upon them by their municipality, county, and state. This is especially true for those schools that rely upon public funding sources, which can include the school district's taxpayers and local/state governments. Conversely, public school districts are also now facing the internal challenge to present a wider variety of schooling options to their students and families that live locally within their services areas.

These challenges have given rise in the past several decades to the charter school movement. While the national percentage of students enrolled at a "charter school" remains small at approximately 5%, (Lake & Hill, 2013), the number of educational organizations that classify themselves as charter schools is expected to continue to grow, especially in urban areas. Albert

Shanker, former president of the American Federation of Teachers, first coined the term “charter school” in 1988 (Chubbs & Moe, 1990). Minnesota became the first state to draft legislation and to open a charter school over twenty-two years ago in 1991, but confusion exists even today regarding what this term might really refer to and who exactly might be responsible for funding such a school. The general consensus on what a charter school might be orbits around ideas based upon the expansion of school choice to include a formal schooling option that is an alternative to the traditional K-12 public school. Despite the language used to define them, the term “charter school” refers to an arrangement in which K-12 institutions are developed to have increased independence to configure into a unique approach to educating their students. The increased freedom, as advocates would maintain, gives charter schools the ability to better meet the needs of their attendees (Nathan, 1996; Fuller, 2000).

2.1.1.1 Charter School Organization

While different from state to state, most charter school laws require that an association such as a board of trustees or directors convene to be responsible for submitting the initial application as well as the ongoing management and organization of the school. This board meets initially to agree to become the primary body responsible for the charter school’s future academic, legal, and financial organization and to be held accountable for establishing the basis of the school, selecting and hiring appropriate staff and teachers, and for making sure that the goals of the institution are accomplished as set forth in the charter. The responsibilities and roles that each board of directors or trustees takes upon themselves seems to differ with each charter school as influences such as federal, state, and local policies for accountability can guide the founders in different ways. The management of these boards can even be conducted by third party organizations such as community or non-profit organizations, which can additionally contribute

to confusion as to who is managing and guiding the schools. Ambiguity in defining what a charter school board might be or how it might be structured is even an issue for those who organize them at their highest level. Many researchers point to Todd M. Ziebarth, vice-president for policy at the National Alliance for Public Charter Schools, who may have most clearly stated this concern: “We’re 17 years into the charter school movement and even we still don’t have a good descriptive analysis of those boards” (Gewertz, 2008). Problems such as a lack of training of board members, misunderstanding regarding the responsibilities of the board, and organizational turnover of the board members are most often submitted as reasons for this confusion. Researchers such as Finn, Manno, and Vanoure (2000), Ascher, Echazarreta, Jacobowitz, McBride, and Troy (2003), and Miron and Horn (2003) have concluded that the charter school board of director’s execution of their mission is essential to organizational consistency and that many charter school boards have struggled with these responsibilities. Research related to non-profit organizations (Greiner, 1972; Wood 1992) indicates that problems with properly maintaining a body such as this may not be exclusive to charter schools. The same research also states that despite the initial organizational problems that might be experienced by non-profit boards, future growth will still likely occur as non-profits struggle and mature.

Charter schools are at the middle of the educational structural chain in between students and parents (beneficiaries of services) and a state (who holds primary responsibility for ensuring the education of its residents). The figure below provides a general overview of the organizational structure of a charter-authorizing agency (usually a college, university, or school district).

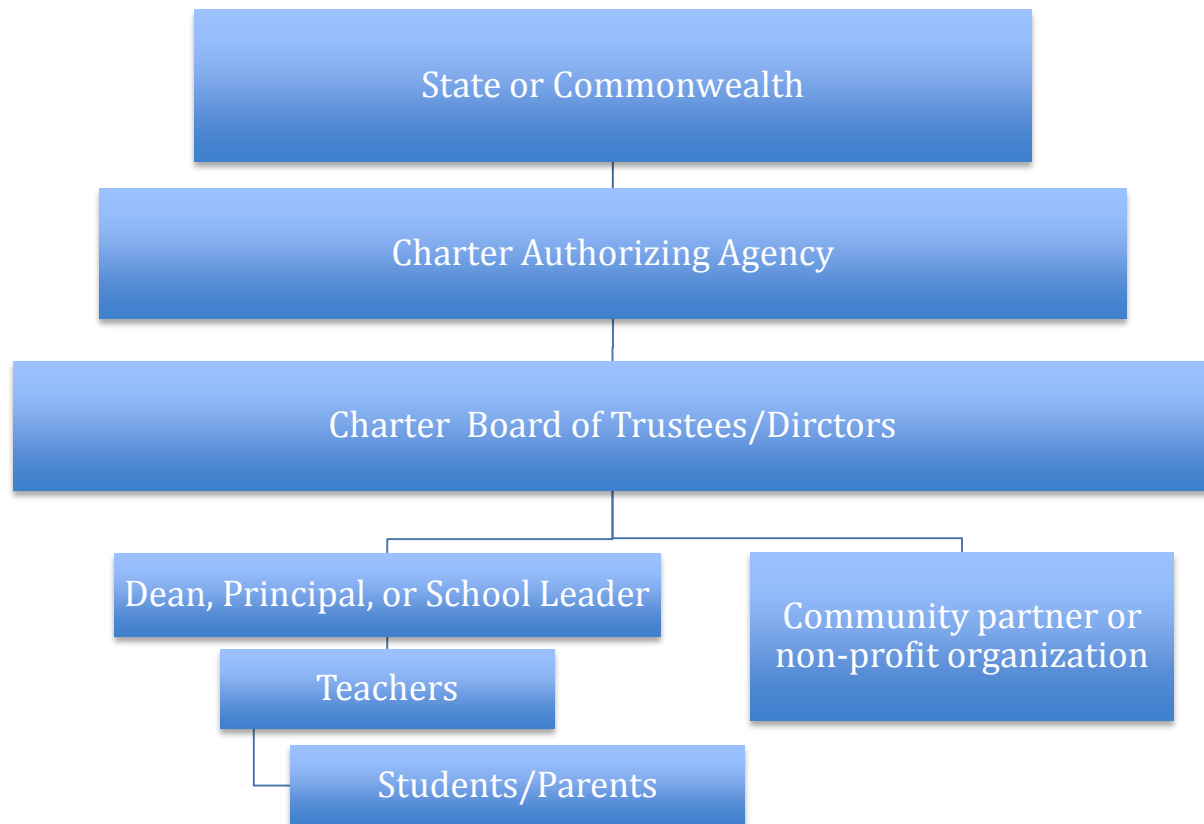


Figure 1. Example of Common Charter School Organizational

Each state's governmental department of education or similarly empowered agencies reviews the new charters and also reexamines the standing charters based on an application submitted by the funding organization. As previously described, the groups which submit the application are obligated to establish a board of directors (or a comparable unit overseeing its governance) at the time that they are ready to submit their initial application. Similar to a locally elected school board that would oversee a public school, this board of directors appoints a school leader (typically a dean or principal) to manage the day-to-day operations, but in some cases the board of directors is directly involved with supervising the school. This dean or principal is then delegated the authority to hire/fire teachers and to directly administer educational services to the pupils.

A body of research from Carruthers (2012), Carlson, Lavery, and Witte (2012), and Stuit and Smith (2012) examined the important question of who is accountable for the oversight of both public and charter schools in each state. While some states might require state-level permission to organize and operate a charter school, other states mandate that a board of directors seeking charter permission to start a charter school simply gain district or county approval. “Authorizer quality” is a concept that has been explored in more recent research (Osborne, 2012) as being very crucial at the beginning of the process of organizing a charter school as well as being vitally important when decisions need to be made by an entity with oversight for correcting, or even closing, a failing charter school. The following table illustrates organizational methods according to the National Alliance of Public Charter Schools (2010).

Table 1. Public Charter School Authorizers by State, 2008-2009

Local School District alone: AK, IA, KS, MD, TN, VA, WY
State Education Agency alone: AR, CT, HI, MA, MS, NC, NH, NJ, RI, TX, UT
Local School District AND State Education Agency: CA, DE, GA, IL, LA, NM, NV, OR, PA
Local School District and Independent Charter Board: AZ, CO, ID, SC
Independent Charter alone: DC
Combination (incl. higher education and non-profits: FL, IN, MI, MN, MO, NY, OH, OK, WI

Note. Adapted from National Alliance for Public Charter Schools, 2010.

2.1.1.2 Charter Schools in Pennsylvania

The Commonwealth of Pennsylvania passed charter school legislation under Act 22 of the Pennsylvania School Code in 1997 (Carr-Chellman & Marsh, 2009). Commonly known as Charter School law, the aim was to improve the quality of learning, expand educational opportunities for students, support the use of different teaching methods, and generally offer educational consumers such as parents’ additional choices for their children. There were 61, 770 students in grades K-12 were enrolled in charter schools in PA in 2011-12 according to the Center for Research on Educational Outcomes (2013).

2.1.1.3 Educational Innovation at Charter Schools

With less oversight, a greater ability to self-organize, and wider freedom to modify teaching methods, many charter schools recruit with and tout their ability to offer a different experience to students than the public school system. Research from Barbour, Hasler-Waters, and Hunt (2011) indicates that while many are able to operate using unique methods, not all sources of online learning are fulfilling their promises of educational innovation. A report on charter practices in Michigan (Arsen, Plank, & Sykes, 1999) found that there were no significant differences in school practices between traditional public school and charter schools when examining the organization of the school, teaching and learning methods, governance and management, and any specifically looked for departures from practice that might be significantly different. A following study (Horn & Miron, 2000) in the same state created additional controversy with findings indicating that the techniques used by charter schools that were described as “innovative” were also found to be rather common in the traditional public schools. A similar study on the promise of classroom innovations in Pennsylvania (Miron & Nelson, 2000) indicated that most evidence of autonomy and novelty at charter schools came not from governance or structural uniqueness. It was instead found that innovation originated from the classroom teacher and when there was greater parent involvement when making educational decisions, extending learning beyond the school day, and being attentive to a specific culture in their curriculum, all of which are options that could be implemented in the traditional public school system. Research from Texas and their charter school system several years later (Smith, 2005) also provided little support for the claim of an innovative nature of charter schools. An extensive and more recent study on the same topic (Preston, Goldring, Berends, & Cannata, 2012) examined 203 charter schools and 739 public schools from across the nation and concluded that, on the whole, innovation was not occurring at

a greater rate at charter schools than traditional public schools. However, it is important to note that this research, which was extensive, did not include a sampling of the specific charter school type that has by far gained the most prominence in the past decade: the cyber-charter school.

2.1.2 What are Cyber-Charter Schools?

The invention of the Internet, and its widespread use for purposes related to every aspect of society, has previously affected the field of education by modernizing the field of correspondence courses and distance learning. New instructional delivery methods evolved quickly from distance learning's back-and-forth standard mail correspondences with the brick and mortar physical classrooms to communication that exists entirely in the cyber/virtual environment. Educators with higher degrees of technological expertise began to use the Internet for ways to broaden their curriculum to extend beyond their classrooms. At this point a number of interchangeable terms, including cyber-schools, virtual schools, online learning, web-based instruction, and distance education, are used to describe non-traditional instruction that occurs via the Internet. A cyber-school specifically refers to a K-12 online educational program that is offered by an educational organization with the purpose of the enrollees earning credit toward promotion through grades leading to high school graduation. A "cyber-charter" is therefore an online version of the aforementioned publically funded school that is developed by an educational board of individuals under a charter (Griffin & Wohlstetter, 2001).

Learning in a cyber-charter school can occur synchronously, asynchronously, or as a blended option of the two. Synchronous formats present the educational subject matter in real time with the teacher and students interacting simultaneously while being in different physical locations, whereas an asynchronous format delivers the curriculum at any time, any place, with

the teacher and students interacting via email, discussion boards, and other forms of written communication (Berge & Clark, 2005).

Research suggests that there is greater complexity to online learning than other educational settings (Ferdig, DiPietro, & Papanastasiou, 2005) and it is necessary to recognize that there are very different pedagogical practices for face-to-face instructional practices, some of which do not easily translate to an online classroom (Davis & Roblyer, 2005). The interaction of the teacher and the student is very different as the means of facilitating the learning process occurs with a vastly different dynamic (O'Neil, 2006). At the very minimum, online learning necessitates significant adjustment to teaching methods and professional development on the part of the school/teacher in order to create active learning, collaboration, and interactivity (Jaffe, 1997). Many educators have expressed serious concerns whether online learning via a cyber-school is equivalent to face-to-face learning. According to a 1999 study by Palloff and Pratt, a majority of education professionals believe that vastly different techniques and extensive training are needed to successfully teach online as a particular class's curricular content cannot be simply converted from one medium to the virtual. Online educational programs have evolved since their beginning in the 1990s and limited data exists related to the outcomes of online teaching and learning (DiPietro, Ferdig, Black, & Preston, 2008). The multi-faceted communication techniques that occur in the classroom between the student and teachers cannot always be easily translated to the online cyber-learning environment. Little research exists to truly inform decision-making for parents, students, schools, and policy makers regarding possible advantages or disadvantages to cyber-learning. The majority of research on online and face-to-face learning has been done in the higher education setting (O'Dwyer, Carey, & Kleiman, 2007). Whether or not this translates to the high school level is unknown and some

researchers (Cavanaugh, Gillian, Kromrey, Hess, & Blomeyer, 2004) advise against using the results from post-secondary education due to the unique nature of the K-12 setting.

2.1.2.1 Types of Cyber-Schools and Online Learning

The quickly changing online landscape makes categorizing the types of online learning key to understanding the research. The authors Watson, Winograd, and Kalmon (2004) use five different classifications of cyber-schools:

- Supplemental programs, in which students attend a brick and mortar school but are enrolled in an individual online course. This is also referred to a “blend” of the options.
- Single-district cyber schools, in which the cyber-school is organized by only one school district.
- Multi-district cyber schools, in which several schools enter into an agreement with other local school districts to offer online options to their combined population of students.
- Cyber-charter schools, in which any student from across a certain region (usually limited by state boundaries) can choose to enroll.
- Statewide cyber-schools, in which a particular state authorizes and supervises an online program supervises them.

Based on the type of delivery, online learning courses can be further classified (Allen & Seaman, 2010) according to the following:

- Online course, in which all of the content is delivered online (>80)
- Blended courses, which combines online (30-79%) and face-to-face delivery
- Web-facilitated courses, in which face-to-face technology utilizes online web content to supplement the curriculum (1-29%)

2.1.2.2 Why Students Choose Cyber-Charter Schools

Online learning can also be pursued as a solution for educational problems, both real and perceived. The phenomenon of correspondence learning originated with the solution that it initially presented to the challenges that might be imposed by distance, geography, weather, or school report times. Other reasons might include personal/social issues such as religion, bullying, instructional issues such as non-certified teachers, organizational issues such as overcrowding, and/or academic issues such as a desire for acceleration (Cavanaugh & Clark, 2007). Categorized as private schools, cyber-charter schools can be a legitimate alternative when a public school's curriculum might interfere with a family's religious persuasion (Huerta, Gonzalez, & d'Entremont, 2006). The intersection of religion and government is one that is hotly debated, although the right for parents to direct their children's public or private education, including religious educational institutions, has long been established. Enrollment in a cyber-school can also create the opportunity to get college credit in courses that their smaller (and usually rural) high schools might not offer, which was the reason cited by over 43,000 students that enrolled in an Advanced Placement (AP) course (Smith, 2005).

Proponents of cyber-schools and the "anytime/anywhere" nature point to a body of research that indicates online learning increases a student's productivity due to the structure of the learning environment itself. It is believed that additional individualization and personalization can provide "the potential to facilitate assessment of individual learning needs and ongoing feedback for improved outcomes" (2005). The suggestion is, therefore, that online learning improves both the quality and the efficiency of a student's education beyond a more traditional educational option.

Parents have the right and responsibility to seek the best educational option for their children. The impetus for examining different school choice options may occur when the parental belief exists that the public school has not met its responsibilities. However, it has been found that the greatest contributing factor to a student's success is the degree of parent involvement (Bifulco & Ladd, 2006; Jeynes, 2003). This can be especially true for low income and minority households (Bryk & Schneider, 2002). This research indicates that choice of a different schooling option such as a charter or cyber-charter school might not always be the solution to the educational issues that might exist for that student. This may be an awkward aspect for K-12 schools to approach with a parent when fingers are being pointed and when thousands of dollars of student funding may be at stake.

2.1.2.3 Cyber-Charter Schools in the Commonwealth of Pennsylvania

Cyber-charter schools in the Commonwealth of Pennsylvania are subject to the Charter School Law, Act 22 of the School Code. Act 88 of 2002 established the PA Department of Education as the entity accountable for overseeing these institutions in this state. This includes jurisdiction over whether to renew or repeal an organization's charter (Pennsylvania Department of Education, 2006). As previously described, cyber-charter schools in PA are also held responsible for many of the same tasks as other educational institutions, including health and safety, non-discrimination, and accountability. They also must appoint a board of directors to operate the school, hire teachers and staff, and be responsible for the fiscal management of the cyber-charter school. Each has an independent board of directors and has established itself as a 501 (c) (3) organization, a classification for non-profit and tax-exempt institutions.

PA had 16 cyber charter schools serving 34,694 students in grades K-12 in 2012-13, which is a 7% increase from the 2011-12 school year. There were thirteen public cyber-charter

schools in Pennsylvania in the school year according to the PA Department of Education (2013) as illustrated by Table 3.

Table 2. Cyber-Charter Schools in PA in 2012-13

Cyber- Charter Name	Grades Served
21 st Century Charter School	6-12
Achievement House Charter School	9-12
ACT Academy Cyber Charter School	K-12
Agora Cyber Charter School	K-12
ASPIRA Bilingual Charter School	K-12
Central PA Digital Learning Foundation Charter School	K-12
Commonwealth Connections Academy Charter School	K-12
Education Plus Academy Cyber Charter School	K-12
Esperanza Cyber Charter School	9-12
PA Learners Online Regional Cyber Charter School	K-12
Pennsylvania Cyber Charter School	K-12
Pennsylvania Distance Learning Charter School	K-12
Pennsylvania Leadership Charter School	K-12
Pennsylvania Virtual Charter School	K-12
Solomon Charter School, Inc.	K-12
SUSQ-Cyber Charter School	9-12

Note. Adapted from http://www.portal.state.pa.us/portal/portal/server.pt/community/charter_schools/7356. Pennsylvania School Board Association, 2013.

2.1.2.4 Cyber-Charter School Funding Sources In Pennsylvania

The United States continues to spend a greater amount than ever each year on public education (Lips, Watkins, & Fleming, 2008). The sources of funding for education usually include three different governmental levels (federal, state, and local). In some cases a private or non-profit organization may choose to found, fund, and operate a charter or cyber-charter school. EMOs (education management organizations) create partnerships with the schools to provide the educational services and operation. A review of literature related to EMOs revealed controversy on how publicly funded non-profit organizations such as charter and cyber-charter schools should direct extra funds that might result from their cost-saving choices in management.

This is a vitally important aspect of the funding of PA charter schools, including cyber-charters: the funding for a student's public education must follow the students wherever they choose to attend. Much to the chagrin of the public schools, the local district is responsible for providing payment for any student who resides within their municipality to a charter or cyber-charter school that a student chooses to attend. This must be done whether or not the student has ever previously attended that public school or previously attended another non-traditional program such as home schooling. Each district is responsible for calculating their own reimbursement rate from a formula specified by the PA Department of Education based on factors such as enrollment date and whether or not the student receives special education services. Even when some findings might suggest that charter and cyber-charter schools are indeed able to show that student achievement results can be comparable to public schools but at a lower cost (Gronberg, Jansen, & Taylor, 2012), questions are consistently raised from concerned stakeholders on both sides of the school choice vs. public school debate as they discuss the concept of the educational marketplace and cyber-schools' place within it.

2.2 WHAT DOES THE RESEARCH SAY ABOUT THE ACADEMIC ACHIEVEMENT OF STUDENTS FROM NON-TRADITIONAL SCHOOL CHOICE OPTIONS?

Achievement data is frequently used as the main determinant of charter and cyber-charter school success by parents and students and the hope is that an easily understood “apples to apples” comparison can be made to a traditional K-12 high school or school district. While assessment data does constitute just one measure of a students’ or school’s performance, it is still a significant part of the standards required by the No Child Left Behind (2002) and one used by states to enforce accountability for their schools. Great interest exists in comparing students in charter and cyber-charter environments to traditional K-12 schools and school districts.

The question as to which provider of education services are the most proficient is still one that is currently being explored. The limited evidence to date seems to be mixed as to whether online learning impacts student learning positively, negatively, or whether the actual platform through which learning occurs is even a factor that might affect a student’s achievement at all (Zimmer, 2007). Much of the online learning research focuses on technological delivery methods (Rice, 2006) or policy and management (Tucker, 2007), rather than learning and achievement. No one non-traditional schooling option has shown consistently positive results over a variety of circumstances (Smith, 2005). A 2009 review of school literature relating to any type of virtual schooling (Cavanaugh, Barbour, & Clark, 2009) examined 226 reports and only 26% included or addressed cyber-charter schools. Just 5 of the 226 reports on this rather specific topic investigated how student learning might be evaluated, despite greatly increasing enrollment in this type of non-traditional schooling option. Proponents on both sides of the debate point to an increasingly varied set of measuring tools to determine the effectiveness and the need for cyber-

charter options, including, but not limited to: student achievement scores, research, enrollment numbers, state applications for new school choice options, feedback, state and federal funding allocations, and anecdotal data from students, parents, and other stake-holders. Both sides of the school choice debate use conflicting academic research in order to stress their agenda. A landmark study by the Center for Research on Educational Outcomes at Stanford University released in June 2013 provides the greatest source of comparison of these schooling options, but the diversity of findings in the existing research leads this examiner to conclude that school choice options such as cyber-charter schools are neither inherently good nor bad, but simply another schooling option that could be selected by families and students.

2.2.1 Variations in the Literature when Comparing Achievement Data from Charter and Cyber-Charter Schools to Traditional Public Schools

There is little depth but great variety in the findings that compare online learning verses traditional schooling. Prior to examining the previous research on this topic, it is important to consider the reasons why there may be such variations of findings. The first possibility as to why there have been mixed results when comparing these online and traditional learning options relates to an inherent characteristic of the charter school movement itself: the differences in charter policies, structures, and stated purposes/goals across the United States. The charter school movement, including the organization, certification, and monitoring of each school, has largely been driven by each state rather than a national set of policies (Zimmer, Gill, Booker, Lavertu, & White, 2009). Just as each of the states sets the standards for the traditional public school system, there can be many different variants of the standards for charter schools within that state. Charter schools have the ability to try out alternative pedagogical methods, experiment

with curriculum, and determine their own organizational structures, but this same autonomy also creates difficulty in identifying a standardized method of evaluation when looking at 50 different state authorization and monitoring methods.

The second possible explanation related to the reasons for variations in the findings on charter success is the importance of quality teaching. Given the crucial nature of having experienced educators, research into the patterns of teacher turnover as a difference-maker in achievement data from charter to public schools has been explored in the literature. A recent Schools and Staffing Survey (Stuit & Smith, 2012) provided an empirical conceptualization of the benefits and costs of frequent teacher turnover. This research found that the lower rate of unionization of charter school employees, who lack union benefits such as tenure and collective bargaining, might be a primary factor to explain why there is higher teachers turnover at these institutions. These data also suggest that non-unionization could also be why there is generally a younger and less experienced staff at the charter schools. The disparities in achievement data and conclusions concerning the benefits of charter schools verses public schools may be attributed to the differences in who is providing the instruction.

A third reason for possible difficulty in comparing these types of educational options is the level of maturity of the individual charter school. Carruthers (2012) suggests that while the level of experience of each individual educator can make a difference, the overall length of time that a school has been operating can also be important. Since most public schools have been in existence for years (many for decades), they possess an advantage in terms of historical infrastructure that could be important when comparing them to the relatively new charter and cyber-charter schools. Most public schools have already gone through the growing pains and trial/error that their contemporary competitors are just now experiencing.

Yet another reason that the research community has found mixed results when comparing charter schools and public schools could be the variation of approaches to analyzing the achievement affects. When examining longitudinal data, researchers (Center for Research on Educational Outcomes, 2012) examined the variety of conventions of applying two quasi-experimental analytical methods such as fixed affect and a matching strategy known as virtual control records (VCR) when examining charter school data. When looking at fourteen different states and their student achievement data, the research (2012) highly suggests that the reasons why charter schools do not have consistent levels of performance across states is due to differences and even overlaps in their data collection and estimating techniques. The result is charter school data from state to state that is not uniform, presenting another challenge to creating comparisons and drawing conclusions.

Still another factor that contributes to difficulty in comparing these entities is the double-edged sword that exists for cyber-schools in terms of enrollment. Not only is an online population generally a more-itinerant student populace (Buddin & Zimmer, 2005), but the diversity of students who choose enrollment in a charter school (which is often used as a marketing tool illustrating that all learners are welcome) can also create challenges as the online student body may possess a much wider variety of races, classes, geographic locations, religious beliefs, genders and gender associations, abilities, educational beliefs, cultures, learning styles, computer skills, and even differences in general interest in school than a population of students attending a local brick and mortar school. Table 4 illustrates the available data on diversity in charter schools in PA.

Table 3. Charter School Diversity in the Commonwealth of Pennsylvania in 2011-12

African-American:	29,098
Caucasian:	25,498
Latino or Hispanic:	5,692
Students receiving free- or reduced-price lunch:	37,617
Special education students:	8,164
Students speaking English as a Second Language:	775
Students who were repeating a grade:	1,146

***Note.* Adapted from http://www.portal.state.pa.us/portal/portal/server.pt/community/charter_schools/7356. Pennsylvania School Board Association, 2013.**

Any analysis of charter schools must now include the most rapidly growing segment of this movement (the cyber-charter school) and except for one noteworthy exception (Center for Research on Educational Outcomes, 2013), little literature provides an accurate comparison of the outcomes of choosing an online education verses a traditional public high school option exists.

2.2.2 General Findings Supporting Cyber-Charter Learning

Many educational consumers choose the online educational option with the hope that the innovation being offered at a particular online school matches their child's specific needs and will produce better results, including higher achievement, than another schooling option. Unfortunately for those parents and for this review of the literature, much of available research on the achievement successes of this particular school choice option focuses largely on the pedagogy behind online delivery and on a design that focuses on quality outcomes (Ladyshefsky, 2004) and on the delivery techniques (Rice, 2006) rather than on the standardized testing data.

There is some older evidence which indicates that, when it is designed appropriately, education delivered electronically in a cyber-environment can improve how a student might learn, what a student might learn, and can deliver on the lofty promise of delivering the highest-quality educational opportunity for all children (Earle, 1998). Runnels, Thomas, Lan and Cooper (2006) confirmed these findings by stressing that the focus should be on “quality” online instruction that is well designed by those with both education and technological expertise as being significant to best practices in producing positive outcomes for learners that will matriculate to higher education. Parents, students, and other stakeholders looking for greater accountability often point to ways that online learning and cyber-education meets the needs of learners in different and increased ways other than achievement data. Research from early in the online learning phenomenon (Kearsley, 2000) indicated that given equal quality of instruction, a student learning in an online environment generally achieves at a level equal to that of his peers in a brick and mortar classroom. The student-centered approach offered by an online learning institution is often highlighted as a way to provide an active learner with improved achievement in a subject matter (Rovai & Ponton, 2005). Proponents point to methods through which online learning can offer ways for student to participate, gain knowledge, and reflect upon more authentic and real-world problems (Herrington & Oliver, 2000). Further research (Jonassen, 2000) indicates that putting students in control of their learning decisions via online learning provides multiple learning perspectives for student learning and critical discourse, skills that could serve the learner well throughout a lifetime if the student pursues additional education at the post-secondary level.

2.2.3 General Findings Challenging Cyber-Charter Learning

Educationally, the Internet is a tool used almost daily by students across the nation, no matter what educational option a family has chosen. Technology has been incorporated into almost every American K-12 classroom to the generally accepted great advantage to students, although no definitive answer seems to exist about whether there are real benefits for pursuing 100% online studies through a cyber-school, especially since the graduation rate of cyber-charter students was just 58% compared to 88-95% in traditional high schools in Pennsylvania (PA Department of Education, 2012).

Challengers to online learning also stress that the technology itself does not cause learning to occur. The actual course development of online classes can prove to be problematic as some courses lack basic design considerations. There are many content, technical, instructional, and navigational factors that developers need to take into consideration (Powell, 2001) when creating an online course. Uploading a textbook to the Internet is often decried as poor practice in using the online medium for instruction and the individual online course designer needs to utilize advance organization to create an appropriate framework and context for instruction.

2.2.4 Charter School Achievement Data Comparisons

As previously discussed, the organization of the charter school movement creates challenges for comparisons across the nation in terms of achievement data. As also previously mentioned, there is a scarcity of research on topics related to cyber-charter schools due to their relatively recent emergence. Some research into cyber-charter academic achievement was discovered, though. In

2004, ten studies on cyber-charter schools from seven states examined more than 7, 500 students from grades 3-12 (Cavanaugh, 2007) and found that pupil achievement was statistically equivalent between the traditional classroom and the online schooling. Ferdig, Dipietro, and Papanastasiou (2005) also found evidence indicating that there is equality in achievement between cyber school students and brick and mortar based students when examining students' mathematic courses in Wisconsin. However, virtually almost all of the serious scholarly conclusions on cyber-charter achievement verses traditional public school achievement needs to be extrapolated from several recent studies by the Center for Research on Educational Outcomes (CREDO) at Stanford University which studied the wider category of charter schools.

2.2.4.1 National Charter Achievement Data

The first CREDO study (2009) examined fifteen states and the District of Columbia, a sample population representing 70% of the students in the US enrolled in charter schools. Their investigation did find evidence of achievement gains at charter schools, but predominantly centered in reading at the elementary level and in math at the middle school level. There were no clear improvements found by this study at the high school level. When examining the performances of charter schools across a variety of subject areas, CREDO found that 17% of charters were doing significantly better than the traditional public schools, but 37% of charter students were performing worse than the public schools in the areas of reading and math. The other 46% performed neither better nor worse. Further research on the related topic of who are the charter authorization bodies was conducted several years later (CREDO, 2011) and found that there is little evidence to demonstrate that permitting each individual state to be the designated authorizers of new school systems would lead to improved student achievement.

2.2.4.2 Commonwealth of Pennsylvania Charter School Achievement Data

The U.S. Department of Education requires the Commonwealth of Pennsylvania Department of Education (PA PDE) to measure the academic performance of charter (including cyber-charter) schools each year. The PA DOE establishes benchmarks for being recognized as an institution that has met the expectation for progress as Adequate Yearly Progress (AYP). The primary source of data through 2012 has been from the state standardized tests, known as the PSSA: Pennsylvania System of State Assessments, although graduation/dropout data, attendance data, and other measure of educational and institutional achievement are also examined. The type of standardized testing used by the Commonwealth of Pennsylvania has continued to evolve to include Keystone testing in 2014, but at the time of this research the PSSA data was the primary measure of student achievement.

Research related to charter school accountability specifically from PA is not encouraging for charter, including cyber-charter, schools. CREDO issued another report that included PA in April 2011 that showed that students in PA charter schools made fewer significant gains in learning as compared to their peers in traditional K-12 schools. As initially shown both by this study and by the PSSA results, students in public schools appear to be out-achieving students in charter schools, as 94% of school districts (467 out of 499) met the bar for AYP in 2010-11, while only 60% of charter schools (86 of 142) made AYP that same year (CREDO, 2011).

Controversy erupted in 2012 when the PA Department of Education was forced to recalculate their 2010-11 adequate yearly progress data for all charter schools (including cyber) so that the determination would be in alignment with the same AYP expectations as traditional K-12 high schools (Pennsylvania School Board Association, 2012). The PSBA filed a formal objection with the Pennsylvania Department of Education to request that the DOE recalculate the

approved charter schools adequately yearly progress data in a method consistent with which the public schools were rated. The rationale for this request was that charter schools in PA should be expected to show progress in academic performance (AYP) just as a traditional high school is expected to deliver. The Pennsylvania School Board won their case and a re-calculation was done that produced even lower AYP achievement results by the charter schools for the 2010-2011 school year. By this corrected method, only 77 of the 144 (53%) charter schools based out of brick and mortar buildings in Pennsylvania met AYP than under the less rigorous method (PSBA, 2012). Table 5 illustrates these recalculations.

Table 4. Commonwealth of PA Charter School 2010-11 PSSA Recalculations

AYP Status	September, 2012 Data	%	January, 2013 Update	%
Made AYP	77	49%	43	28%
Making Progress	15	10%	8	5%
Warning	34	22%	61	39%
School Improvement I	10	6%	14	9%
School Improvement II	4	3%	5	3%
Corrective Action I	3	2%	4	3%
Corrective Action II	13	8%	21	13%

Note. Adapted from https://www.psba.org/issues-advocacy/issues-research/cyber-charter-schools/PDE_recalculation_shows_more_charters_not_making_ayp.asp. Pennsylvania School Board Association, 2012.

While the importance of reaching Pennsylvania's benchmarks for AYP are important, comparing the learning benefit results in subject areas in these findings can also assist with comparing these educational options. The 2011 CREDO research show that just 25% of the charter schools in PA have more significant gains than their public counterparts in reading, but their achievement is overshadowed by nearly half of charter schools that have significantly lower gains. In the area of math, almost half of the charter schools in the CREDO study performed worse than the public schools, while one quarter did indeed outperform the public schools. Another finding of this same research that relates to the topic of this particular study was that the student achievement at online Pennsylvania charter schools (cyber-charter) was markedly lower

than the student achievements at the local brick and mortar charters. Most relevant to this study, each of the twelve cyber-charter schools in Pennsylvania performed considerably lower in the areas of both reading and math (CREDO, 2011).

2.2.4.3 Pennsylvania Cyber-Charter Achievement Data

While the PA Department of Education originally found that only 25% of the specific sub-category of “cyber” charter schools met AYP last year (PA DOE, 2012), the recent recalculations indicate that 0% of the cyber-charter schools now met the standard. Detractors point to this low achievement as evidence that traditional K-12 schools are superior options than their online counterparts. The following table presents PA DOE data regarding these institutions for the last several school years (2012).

Table 5. Cyber-Charter School Progress in 2009-12

Cyber Charter Name	Did the school meet AYP?			
	2009	2010	2011	2012
21 st Century Charter School	Yes	No	Yes	No*
Achievement House Charter School	No	No	No	No
Agora Cyber Charter School	No	No	No	No
ASPIRA Bilingual Charter School	Opened in 2010		No	No
Central PA Digital Learning Foundation Charter School	Yes	Yes	No	No
Commonwealth Connections Academy Charter School	No	No	No	No
PA Learners Online Regional Cyber Charter School	No	No	No	No*
Pennsylvania Cyber Charter School	Yes	Yes	Yes	No
Pennsylvania Distance Learning Charter School	No	No	No	No
Pennsylvania Leadership Charter School	No	Yes	No	No*
Pennsylvania Virtual Charter School	No	Yes	No	No
Seuss-Cyber Charter	Yes	No	No	No

Note. Adapted from https://www.psba.org/issues-advocacy/issues-research/cyber-charter-schools/PDE_recalculation_shows_more_charters_not_making_ayp.asp. Pennsylvania School Board Association, 2012.

The next table illustrates the recalculations for the 2010-11 PSSA scores for just the 12 cyber-schools in Pennsylvania.

Table 6. Cyber-Charter 2010-11 PSSA Score Recalculations

AYP Status (12 schools)	January, 2013 AYP	%	September, 2012 AYP	%
Made AYP	0	0%	1	8%
Making Progress	0	0%	2	17%
Warning	2	17%	1	8%
School Improvement I	2	17%	2	17%
School Improvement II	0	0%	0	0%
Corrective Action I	0	0%	0	0%
Corrective Action II	8	67%	6	50%

Note. Adapted from https://www.psba.org/issues-advocacy/issues-research/cyber-charter-schools/PDE_recalculation_shows_more_charters_not_making_ayp.asp. Pennsylvania School Board Association, 2012.

2.3 WHAT DOES THE RESEARCH SAY ABOUT THE UNDERGRADUATE COLLEGE APPLICATION PRACTICES OF STUDENTS FROM NON-TRADITIONAL SCHOOL CHOICE OPTIONS?

The process of undergraduate college admissions is seen as both the gateway and the barrier to higher education opportunities, largely depending on whether it is the applicant or institution's perspective that is being considered. Evaluating which standards that applicants may need to meet is closely overseen and evaluated each year by the highest levels of a post-secondary institution, often including the chancellor or president and board of trustees. In some cases, the development of admission practices has moved beyond just the institution's admission offices. The involvement of other governing bodies influencing admission practices has increased significantly since 1979. In some parts of the country and depending on legislation, a local government, accreditation board, and even a state's higher education commission can be

involved with developing admission policies and standards (Breland, Maxey, Gernand, Cumming, & Trapani, 2002).

As with many large organizations, though, the actual management of students admitted to a post-secondary organization trickles down from governing boards to chief executive officers to deans to directors of enrollment management to the admission committees only to finally fall on the shoulders of an individual admission or enrollment officer. These professionals, who can act unilaterally or be organized into small committees to vote upon admission, are ultimately the actual decision makers charged with the responsibility of reviewing standardized test scores, examining academic transcripts to determine GPAs, reading college admission essays and teacher recommendations, and conducting interviews. While certain guidelines and expectations are surely set by the policy-makers, admission and enrollment officers often have some latitude reviewing admission materials and actually determining who is admitted to the institution.

The review of literature relating to this research question proves to be another example of educational progress outpacing educational research. Related research on the habits of students in more established non-traditional diploma programs such as home schooling were uncovered and are discussed in this literature review, but very little information concerning the practices of cyber-charter students was discovered. In order to provide additional context for the study of admission officer's perceptions of applicants from cyber-charter schools, a review of several other factors related to the college admissions and school choices options was conducted.

2.3.1 College Admissions Overview

An overview of the admission professional's primary tasks and the criteria that are most commonly reviewed during the admission process is an important part of creating a conceptual

framework through which to examine this research question. Admission criteria and processes vary greatly between the nearly 5,000 post-secondary institutions in the United States. There can be standards set for each level of education (community college, business or technical school, college or university) to determine what materials a student must submit in order to be reviewed for acceptance. Just one such echelon is relevant to this study. The following figure illustrates the admission decision criteria in order of importance to undergraduate college and universities according to a recent survey of the 12,000 members of the National Association of College Admission Counselors (2012).

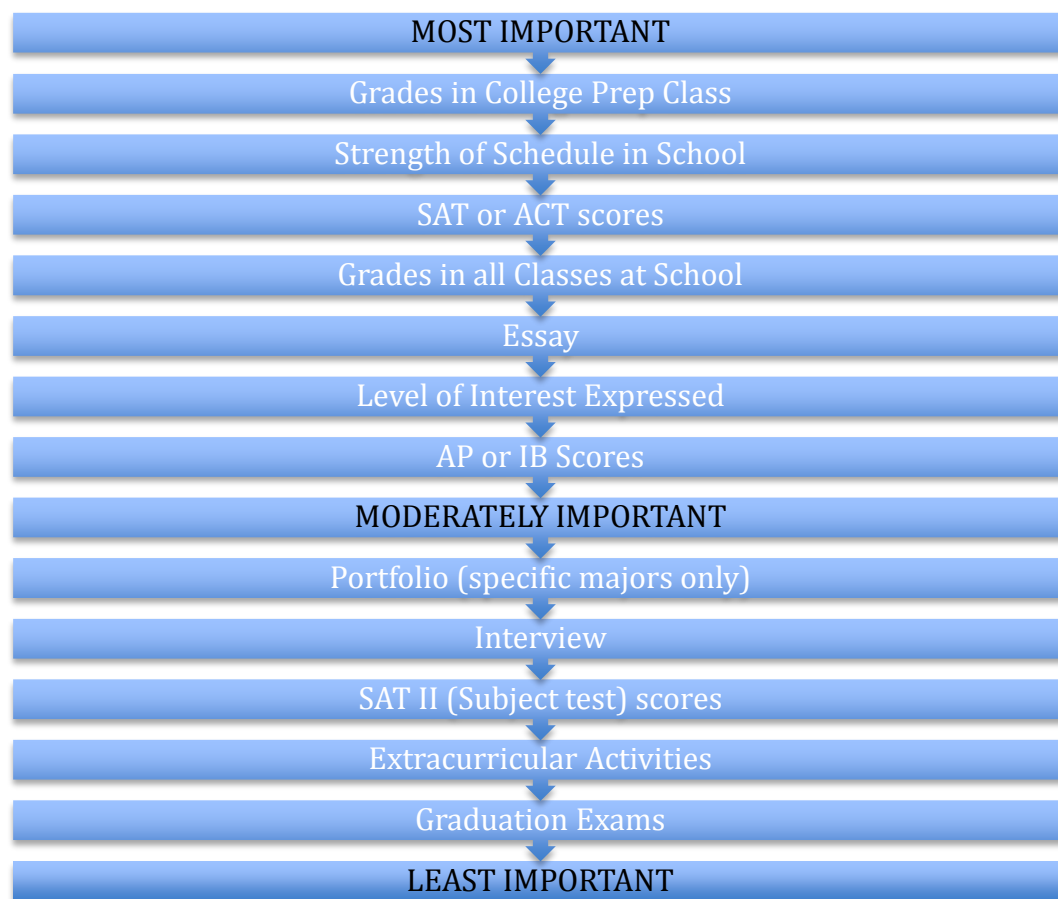


Figure 2. Admission Requirements from Most to Least Important

Note: Adapted from

<http://www.nacacnet.org/research/PublicationsResources/Marketplace/research/Pages/StateofCollegeAdmission.aspx>. National Association of College Admission Counselors, 2013.

2.3.1.1 The College Admission/Enrollment Officer

Colleges organize their admission or enrollment offices differently and staff them with individuals possessing a variety of academic and professional backgrounds. The procedures, requirements, and expenses also vary depending on the institution. In general though, the role of the college admission office and admission officers is to attract applicants to their institution, evaluate the applications that are submitted to the office, and then successfully convert the admitted students to enrollees at the institution. The following figure illustrates the results of a survey in which the chief enrollment officers at colleges were asked which skills they most preferred in a highly qualified admission counselor (NACAC, 2011).

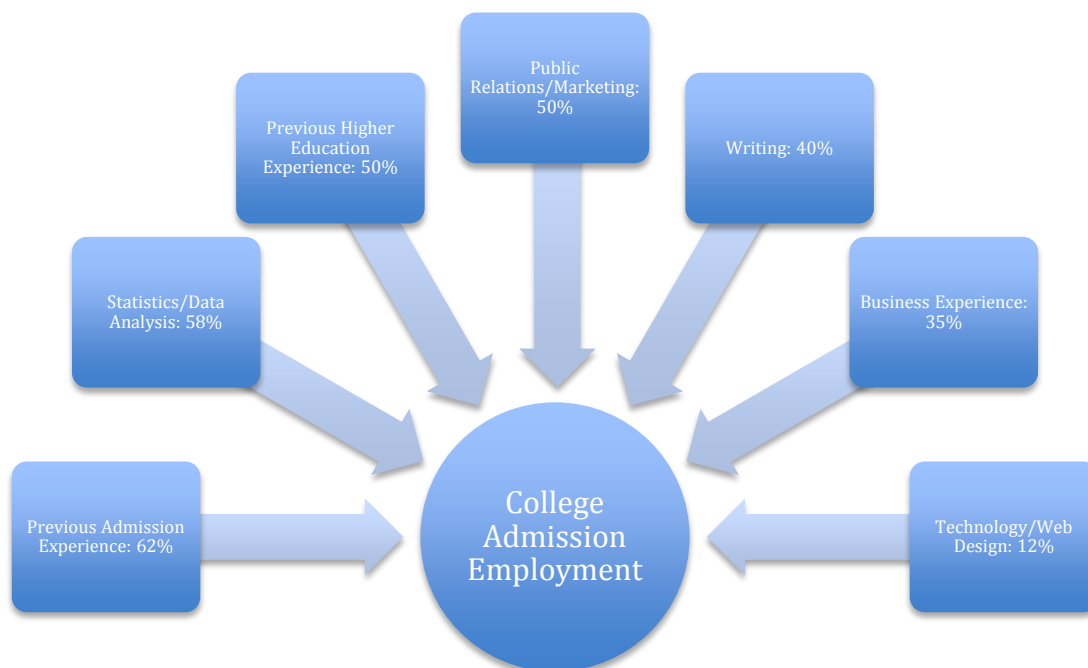


Figure 3. Preferred Job Experience for Admission Officers

Note: Adapted from

<http://www.nacacnet.org/research/PublicationsResources/Marketplace/research/Pages/StateofCollegeAdmission.aspx>. National Association of College Admission Counselors, 2013.

The task that admission officers are asked to perform most related to the topic of this researcher's study is the review of an applicant's admission materials. At some institutions this

can be quite a burden as the number of applications per admission counselor can be rather high (NACAC, 2011), as shown in the next table.

Table 7. Ratio of Admission Applications to Admission Counselors in 2010

National Ratio of Admission Counselors to Applicants	527:1
Ratio of Admission Counselors to Applicants at Publicly Funded Institutions	981:1
Ratio of Admission Counselors to Applicants at Private Institutions	402:1

Note. Adapted from <http://www.nacacnet.org/research/PublicationsResources/Marketplace/Documents/SOCA2011.pdf>. National Association of College Admission Counselors, 2011.

The larger ratio at the large publicly funded institutions is due to these colleges receiving 2.5 more applications than their contemporaries at smaller private institutions (NACAC, 2011).

2.3.1.2 Student Grade Data As Used in College Admissions

The most important factor used in college admissions is the examination of grade data, especially when calculated by Grade Point Average (GPA). GPA is commonly used as a gauge of a student's scholastic success and is determined by dividing the total number of grade points received by the total number attempted. In some cases, high schools report their GPA on a 4.0 scale or 5.0 scales, with weight given for Honors level coursework, AP classes, and more. Research (Cheung & Kan, 2002) has found a high connection between GPA and college level success. Anderson, Benjamin, and Fuss's research (1994) indicated that the greater high school academic qualification obtained by a student, the greater the results of student learning at the college level. College admission officers are examining not only the grades earned by the applicants, but the combined strength of the curriculum in which the student has chosen to earn those grades becomes vitally important during the review process for admission.

2.3.1.3 Standardized Testing As Used in College Admissions

The field of college admissions and enrollment focuses a great deal on standardized tests as methods of determining which students are capable of academic success at their institutions. There are several undergraduate college admission tests used in admission practices, including the SAT, an aptitude test, and ACT, a test of achievement. The percentage of post-secondary institutions requiring these test scores remains consistently over 99% (Epstein, 2009) and according to a survey of admission staff, it is the third most important factor during the admission review process (NACAC, 2011). The belief is that when post-secondary schools are asked to review applicants, having a standardized examination score allows the admissions or enrollment officer to compare the applicants knowing that they were offered the SAT or ACT exam under the same circumstances, including time constraint and content. In this way, it is reasoned that students from not only across the United States, but from around the world can be compared. It is believed that elite colleges with higher standards are assisted by college entrance standardized tests to a greater degree than other less strict colleges, as these standardized tests can help to differentiate between their very highly qualified applicants, many of which have GPAs equal to or above 4.0.

SAT and ACT data of a specific group of non-traditional graduates (homeschoolers) indicates that they outperform their public school peers (Ray, 2004) by a full 81 points. Little research on the average scores of the student population examined in this study (cyber-charter student) is available.

2.3.1.4 Other Admission Criteria Used in College Admissions

A number of other factors may also be considered as admission criteria during the review process for enrollment to a post-secondary institution. Almost a third of colleges (25-31%)

indicate that race and ethnicity, first generation status, and alumni relations are factors when determining admission. Most relevant to this study is the inclusion of “high school attended” as one other such factor that matters during the admission process (NACAC, 2011). This indicates that the high school that a student attends can indeed have an affect upon the admission decision, which highly relates to this current study of admission officers’ attitudes toward applicants from cyber-charter schools. Data on the outcomes of attending a particular type of high school education affected admission decisions was not explored in the study.

2.3.1.5 Electronic Proficiency and Maturity as Related to the Admission Process

The use of the Internet in education extends beyond just a student’s courses, online or otherwise. The ability to use technology for all types of educational research includes the ability for high school students to utilize the World Wide Web for college exploration, college application, and even the application for financial assistance. On the other end of this activity, the colleges manage virtually every aspect of the college enrollment process through the cyber-environment. Ninety eight percent of all colleges reported having methods of submitting applications online and forty-three percent reported alerting the applicant of admission via email in a 2011 survey of NACAC member institutions. The number of pen and paper applications shrinks every year and 85% of all college applications were submitted via the Internet that same year. Table 9 indicates online application data for the last several years prior (NACAC, 2011).

Table 8. Online College Application Submissions 2006-2010

Application year	% of applications received via Internet
2010	85%
2009	80%
2008	72%
2007	68%
2006	58%

Note. Adapted from <http://www.nacacnet.org/research/PublicationsResources/Marketplace/Documents/SOCA2011.pdf>. National Association of College Admission Counselors, 2011.

Just as a student's formal academic record may be examined to determine admission, some colleges and universities have been integrating a student's particular technological practices into the review process. Given the public nature of the Internet and especially social media, it is possible for admission officers to utilize Internet sites such Facebook and Twitter to help them perform additional requests for materials, even to the extent of using them as interview methods. While processes such as online chats with enrollment officers or faculty or posting of virtual college essays could be overt methods of evaluating an applicant, more covert explorations into an applicant's personality and characteristics are possible by examining their public Internet presence. It is in this way that the ability to successfully utilize technology could be used by a college to evaluate whether a candidate is fit to even apply to their institution. Capella University (Barnes, 2007) became the first institution to discuss its use of social media and publically accessible web information to see if an applicant meets its criteria for mature and appropriate behaviors. While this institution publically admits this practice, it is very likely that many other institutions are using the Internet and social media to size up their applicants without the knowledge of that potential enrollee.

2.3.2 Career and College Counseling for Non-Traditional High School Students

Advising teenagers on how they can work towards their career and college options is a challenging task, one that can be made even more difficult by challenging student-to-counselor ratios. Data from the US Department of Education indicates that in the public school system there was just one certified school counselor for every 460 students and that only 23% of the school counselor's time was devoted to college counseling (United States Department of Labor, 2011). Similar to the students enrolled at the public high schools, the thoughts of enrollees in the non-traditional educational options also turn towards to the future as graduation nears. These school choice options present a different and sometimes much more intimate environment for learning, but such a choice may also present challenges during the process of exploring post-secondary educational options. While the traditional public schools do have student-to-counselor ratios, easy access to trained personnel may be more challenging for non-traditional students, especially those working from home, when they need assistance with a college search or the financial aid process.

2.3.2.1 Career and College Counseling and Home schooled Students

The decision to access the homeschool option is a very personal one, especially so as the family unit that evaluates the different schooling options is then also deciding to become the very educational institution itself. When this intimate environment is selected, it is likely that the scope of the home schooling supports does not include the extensive career and college advising that might exist with another option. The parents (teachers) of these students generally tend to be highly proficient advocates for their children (as earlier noted by the changes they have made in federal law) but the responsibility for assisting their children through the oft-confusing field of

college admissions now becomes their own challenging task. While accessing certain resources through the local public school career and college planning may be possible, home schooled students usually do not have the access to trained school counselors that may be able to provide more personalized help with the post-secondary exploration process and application process (Cookson & Persell, 1985; McDonough, 1997; Powell, 1996).

When the first significant generation of home school students emerged in the late 1990s, more widespread acceptance of the option occurred at the post-secondary options. This led to increased assistance in the field of college advising as the National Center for Home Education has created listings of “Colleges that Admit Home Schoolers,” complete with rankings of the best institutions in terms of home schooled admission policies (2006). Many college enrollment officers struggle with how to evaluate such applicants, but attitudes seem to be shifting towards the positive as far as the home schooled population is concerned (Jones & Gloeckner, 2004). More recent research (Sorey & Duggan, 2008) indicates that 52% of colleges have an official policy for home school students seeking full time admission. While limited in its scope, this last study reported that 100% of college admission respondents believe that home-schooled graduates would perform as successfully at the college level as those who attended public school.

2.3.2.2 Career and College Counseling and Charter High School Students

As previously discussed, the discrepancies that exist when allocating educational resources in public education can compel families to pursue charter school education (Fuller, 2000). These families often presume that innovative methods and practices will be utilized in their child’s education, including the aspects of a charter school that relate to college and career counseling. In fact, for some charter schools, creating a culture in which the expectation that every student attend post-secondary education is the very impetus for its creation. This may be especially true

in urban areas where the residents have found the local public schools unsuitable for their children. Literature shows that public schools in urban areas, especially those that have lower economic status, have disproportionately less access to career and post-secondary counseling because of the large caseload of students assigned to each counselor (Gonzalez, Stoner, & Jovel, 2003; Lee & Ekstrom, 1997).

Research on the effectiveness of charter school career and college counseling is not encouraging though. Farmer-Hinton & McCullough (2008) found that the presumption that charter schools can more effectively address post-secondary counseling is flawed for several reasons, both of which were also previously cited as two challenges to academic achievement levels by charter schools. The relative immaturity of many charter schools means that the development of innovative career and college counseling techniques is complicated by the staff's time and efforts spent sustaining other parts of the school's infrastructure and student needs. Additionally, less experienced staff hired at charter schools may not always have the education and training to best advise in the field of college admissions counseling (Farmer-Hinton & McCullough, 2008). There was some positive news from this same study, though, as the findings indicated that the smaller student caseloads built better and stronger mentoring relationships in which students who may not have initially considered higher education were encouraged to do so. It is therefore possible that charter schools have the potential to differently address their career and college-related challenges and improve outcomes.

2.3.2.3 Career and College Counseling and Cyber-Charter High Schools

It would seem logical that cyber-charter students face the same challenges to accessing career and college counseling as their charter school brethren attending the brick and mortar charter schools, but the literature offers scant evidence to support this conclusion. The lack of daily

interaction in an asynchronous environment may further complicate this process for online program enrollees. It is possible that the curriculum within each cyber-school allows for the enrollment into an online course related to the topic of career and college counseling or access to a certified school counselor, but once again the practice outpaced the literature in relation this topic.

2.3.3 The College Admission Practices of Non-Traditional High School Students

Literature concerning the career and college practices of non-traditional students after they have graduated from high school is very limited, although some findings on homeschooled students are available. A greater percentage of home schooled students graduated from high school (66.7%) than from the public school system (57.5%) from 2004-2009 and did so while earning higher GPAs (Cogan, 2009). As shown on the following table, there is evidence from the National Center for Education Statistics (2012) indicating that home schooled students score better on the standardized tests required for admission at most colleges and universities.

Table 9. Average Standardized College Admission Test Scores for 2012

	Home Schooled Student	Traditional Student
Average SAT score*	1083	1010
Average ACT score	22.6	21

* Does not include Writing portion of SAT as not every college utilizes this portion of the test.

Note. Adapted from <http://nces.ed.gov/programs/digest/d11/>. National Center for Education Statistics, 2012.

Considering the findings that ACT scores are a dependable forecaster of first-year success at college (Galloway, 1995; House & Keeley, 1997; Kern, Fagley, & Miller, 1998;

Rodriguez, 1996), it is logical to conclude that home schooled students will perform better at college than their traditional school peers.

Another systematic search of the available research was conducted on topics that associated with “school choice,” “charter,” and “cyber-charter” schools and their achievement data, “college counseling,” “college admission,” and associated derivatives of these search terms. In particular, an in depth examination was made into the frequently updated research resources of the National Association of College Admission Counselors (NACAC) and the Research and Development Center for The College Board during July of 2013. Zero (0) relevant results were found for the above keywords.

3.0 RESEARCH METHODS

This chapter explains the research methodology used to complete this study of admission officers' attitudes and perceptions about applicants from cyber-charter schools. The goals of this study were to use survey data to assess the variation of admission policies used for admitting cyber-charter applicants to post-secondary institutions in the Commonwealth of Pennsylvania as well as to exploring any correlations that may exist between the characteristics of an institution of higher learning and the perceptions of an admission officer employed at this same institution toward cyber-charter school applicants. In this chapter, the rationale, conceptual framework, research study questions, research methodology, research setting and selection process, research procedures and instrumentation, and the data collection and analysis will be discussed.

3.1 RATIONALE

The number of online learning opportunities and cyber-high school diploma programs has significantly increased in the last two decades, resulting in greatly increased enrollment in cyber-charter schools (Clark, 2000; The Peak Group, 2002; Newman, Stein, & Trask, 2003; Hughes, McLeod, Brown, Maeda, & Choi, 2005; Picciano & Seamon, 2006; Picciano & Seamon, 2007). The significance that the rise in enrollment at cyber-charter schools is having on educational policy innovation is evident, especially to the public schools that are rapidly losing students and

funding (Tucker, 2007). Given the increased high school enrollment in cyber-charters schools, post-secondary institutions (colleges, graduate and doctoral programs, community colleges, career training schools), employers, and even branches of the military, are therefore facing the contemporary challenge of evaluating and enrolling this new breed of applicant who have chosen to pursue diplomas from cyber-charter schools, adding to the already difficult task of considering the more established reputations and diplomas earned by applicants from the thousands of traditional public schools across the nation.

There is a gap in the literature regarding whether applicants from 21st century cyber-charter school are evaluated in the same manner as traditional high school applicants during college admission policies. Additionally, little research on the continuing education of the cyber-charter high school graduate (including their post-secondary choices) has been conducted. This is an interesting phenomenon as the enrollment data clearly shows that more and more students are continuing to choose the cyber and cyber-charter school option for their high school studies. It appears that in this case the educational practice of choosing to attend a cyber-charter school seems to be severely outpacing the available research that might support or dispute such a decision. Adding additional data to this discussion may be extremely valuable to all of the stakeholders involved in the cyber-charter school discussion and is the rationale for this study.

College admission counselors are on the front lines of this singularity as they are intensely involved with evaluating the newer credentials of the cyber-charter graduate. Researching their attitudes and perceptions is an important step in determining how this growing population of 21st century learners is viewed and how the high school student's educational placement choice might be impacting their future options for continued study. As previously stated, research such as this is an especially relevant topic for this researcher as it relates very

closely to his past employment as a college admission counselor and his current full-time work as a high school counselor, as well as his part-time online teaching position.

3.2 CONCEPTUAL FRAMEWORK

The increase in enrollment in cyber-charter high schools and resulting matriculation to the college level is not the first occurrence of an influx of applicants with alternate diplomas into the post-secondary admission pool. As was found in the examination of related research, the later part of the 20th century saw a dramatic increase in the number of college applications from home-schooled students (Shea, 1996). These home-schooled students faced significant discrimination during the admission process (Clark, 1997; Richardson & Zirkel, 1997; Simmons, 1992) and during the process of enlisting in the United States military (Department of Defense, 2012; National Defense Reauthorization Act, 2012). As detailed below, several concepts have emerged as the frameworks for this study:

Table 10. Formation of Conceptual Frameworks

Literature Review Findings	Researchers	Conceptual Framework
Texas allows home schools in Texas to be recognized as non-accredited private schools for legal purposes.	Leeper vs. Arlington Independent School District, 1987	Discrimination has previously existed against other non-traditional high school graduates and may exist toward 21 st century varieties of applicants.
Prejudices that existed in the homeschool admission review haven't been eliminated.	Richardson & Zirkel, 1997	
Post-secondary institution that received federal aid prohibited from requiring that homeschooled students take an additional admission test.	Amendment to Higher Education Act of 1965, 1998	
Grades submitted by homeschooling parents can be seen as subjective and aspersions can be cast upon the teaching proficiency.	Clark, 2007	Separate admission policies have existed for non-traditional students applying for post-secondary admission and may exist toward 21 st century varieties of applicants.
Application guidelines exist that dissuade homeschool applicants	Jones & Gloeckner, 2004	
Homeschoolers applying to college are required to complete the content-based SAT II exams in addition to the SAT exam .	AACRAO, 1999	
Only 35% of colleges and universities expect homeschoolers to cope socially as well as traditional high school graduates	Jones & Gloeckner, 2004	
US military limits recruits from homeschooled and online high schools.	Estrada, 2013	
Online diplomas changed to classify as Tier I diploma.	National Defense Reauthorization Act, 2012	

The findings were used as the conceptual framework for a study to determine if these previous phenomena are analogous to the admission practices currently unfolding with cyber-charter school students.

3.3 RESEARCH QUESTIONS

As a result of the literature review and the resulting conceptual frameworks, the following research questions were created and will be used as the basis for this study.

Table 11. Formation of Research Questions

Conceptual Frameworks	Research Questions
Separate admission policies exist for non-traditional students applying for post-secondary admission and may exist towards 21 st century varieties of graduates.	How do the differences in the admission policies that college admission counselors enact for applicants from cyber-charter school differ from those of traditional high school applicants?
Discrimination has previously existed against other non-traditional high school graduates in the past and may exist towards 21 st century varieties of graduates.	<p>To what extent do college admission counselors have different expectations for the success rate of applicants from cyber-charter schools compared to applicants from traditional high schools?</p> <p>To what extent do the attitudes or perceptions of admission counselors toward applicants from cyber-charter school vary according to their employing institutions characteristics?</p>

The answers to these questions can contribute greatly to the discussion about how colleges are handling the great shift in the type of 21st century students who are applying to their institutions. The findings will also guide students and parents as they make educational placement decisions during their high school years while also serving to inform policy for school districts, post-secondary institutions, and possibly even legislation.

3.4 DESIGN OF THE STUDY

The design of this study involved three different parts: the development of the survey instrument, identification of the research subjects, and collection of the data.

3.4.1 Development of the Survey Instrument

Social researchers often collect new data from a larger population using surveys (Babbie, 2007). Surveys are designed to collect standardized data from the subjects included in a particular population sample (Borg & Gail, 1989). Doing so allows the researcher to examine how the responses to questions or variables are distributed across a population that was sampled using similar methods. It also permits the examination of relationships between multiple variables within the survey. Alrek and Settle (1995) also describe how surveys are among the most accurate, least expensive, and quickest way to obtain information.

During the design phase of this survey, specific goals were developed and the question wording was carefully selected in order to match the questions with the concepts to be studied (Mertens, 2010). An eight question survey was designed for electronic completion and collection of data and is estimated to take each respondent no more than 2-3 minutes to complete, including time for reflection. This data collection instrument possessed three distinctive sections that were created based upon a previous survey research conducted with a different population of non-traditional students. This pervious associated work (Jenkins, 1998; Jones & Gloeckner, 2004) on college admissions and non-traditional students was based upon Barnebey's (1986) collection of the characteristics of colleges and universities such as geographic location, size, and affiliation as well as their specific requirements for different populations of applicants. This researcher used

Barnebey's survey as a template and appreciably modified the question format used by Jenkins (1998) and Jones and Gloeckner (2004) to create an instrument that is specifically designed to examine a non-traditional population of high school students of the 21st century variety (cyber-charter school students). Jones and Gloeckner, the authors of this related study, were contacted via email by this researcher in an attempt to obtain permission to adapt questions from their 2004 survey involving home schooled students. In November, 2012, Dr. Gene Gloeckner gave email permission for this researcher to "Go forth and analyze more please (G. Gloeckner, personal communication, November 29, 2012)." Appendix A contains the transcript of the email.

While the three sections of the survey were based upon Jones and Gloeckner's work from 2004, it was heavily adapted to reflect classification changes, societal changes (such as online colleges), and additionally modified in order to collect additional forms of data. These adaptations are illustrated in Appendix B. The survey instrument as seen by the population sample is located in Appendix C. The following table illustrates the survey questions as they relate to the research questions:

Table 12. Formation of Survey Questions

Conceptual Frameworks	Research Question	Survey Questions
Separate admission policies exist for non-traditional students applying for post-secondary admission.	1. How do the differences in the admission policies that college admission counselors enact for applicants from cyber-charter school differ from those of traditional high school applicants?	2.1-2.3
Discrimination has previously existed against other non-traditional high school graduates in the past	2. To what extent do college admission counselors have different expectations for the success s from cyber-charter school compared to applicants from traditional high schools?	3.1-3.4
	3. To what extent do the attitudes or perceptions of admission counselors toward applicants from cyber-charter school vary according to their employing institution's characteristics?	1.1-1.5

The first section of the survey (questions 1.1-1.5) asked respondents to describe their own professional experience as well as some general characteristics of their institution. The second section of the survey (questions 2.1-2.4) asked about the cyber-charter admission policies and the institution's process for reviewing applications from this population. The final section requested information on the perceptions and attitudes (3.1-3.4) of admission/enrollment officers towards applicants from cyber-charter schools.

3.4.2 Identification of the Research Subjects

The unit of analysis for this study was a population of admission/enrollment officers from post-secondary institutions in the Commonwealth of Pennsylvania. The sample frame for this population were the members of PACAC (Pennsylvania Association of College Admission Counselors), a non-profit educational organization comprised of over 1,000 college admission counselors, independent educational consultants, and other educational professionals who guide students through the post-secondary school transition (PACAC, 2013). PACAC is the state-level organization of NACAC, the National Association of College Admission Counselors. Permission to gather information from this unit of study via an electronic survey was granted by the PACAC President in December, 2012. After the consent to participate, the first two survey items (1.2 and 1.3) were the only required questions, as they served to show that the respondent is indeed an admissions professional responsible for making admission decisions and not an admission professional with other areas of responsibility (Only recruitment responsibilities) who may have chosen to join PACAC.

3.4.3 Collection of the Data

The survey population used for the research (PACAC) maintains an extensive database of membership information, including email addresses. Permission to email each PACAC member using the BCC (Blind Carbon Copy) email option was granted by the PACAC President via email in December, 2012. The researcher emailed the survey invitation email text (see Appendix C) to the PACAC President on January 30, 2014 and asked the President to first send him the email for review to ensure proper formatting and functioning. After confirming this review, an email to this distribution list was sent by PACAC. The selection of the email method was chosen as it provides legitimacy to the survey completion request when it is distributed by a professional organization that respondents have actively chosen to belong to and agreed to be contacted by for purposes such as this. Selection of the email method for distribution also allowed for the protection of subjects for those who may choose to opt out of completing the survey.

In the email, the admission officers were asked to complete the Internet-based survey. The email contained a link to the SurveymonkeyTM electronic survey tool, which was used to design, collect, and analyze the data, and was embedded in the email. SurveymonkeyTM was chosen because it is a web-based survey service that allows users to create and distribute surveys and to obtain reports on the responses. SurveymonkeyTM provides security for the data, as only the researcher possesses the unique online code for accessing and examining the data.

The full text of the email request and survey instructions can be found in the Appendix C. While educational surveys seem to yield a higher response rate than those solicited from the general population (Borg & Gail, 1989), no incentive was provided to the respondents and may have contributed to a lower possible yield rate (Bourque & Fielder, 1995).

3.5 DATA ANALYSIS

Respondents to this survey were asked to provide categorical scales, rating scales, and an optional narrative field. The analysis will be conducted to examine whether the attitudes and perceptions of admission officers responsible for making admission decisions for cyber-charter applicants were related to the characteristics of the institutions at which they are employed. In order to discover if there is a relationship between two categorical variables, the Chi-Square test for independence was conducted. This statistical test, also referred to as the Chi-Square test of association, measured the divergence of the observed data from the values that would be expected under the null hypothesis of no association (Rosenthal, 1994). The Chi Square (X^2) test is one of the most used members of the nonparametric family of statistical tests (Chase & Dummer, 1992). Advantages of using the Chi-Square (X^2) is that it is rather easy to compute and can be used with data that has been measured on nominal (categorical) scales. This is very important because data such as that collected by this research study cannot all be ordered numerically and therefore it would not be appropriate to use statistical tests that require numerical data.

For each part of this analysis, the Chi-Square test statistic was indicated as well as the *p-value*. When a statistical test such as the Chi-Square is conducted, a *p-value* determined the significance of the results and tests the validity of a claim that is made about a population. This *p-value* is the estimated probability of rejecting the null hypothesis (H_0) of a study question when that hypothesis is true. This shows whether there is evidence of a relationship between the location, size, affiliation, classification, and selectivity of a post-secondary institution and the admission counselor expectations for overall success of cyber-charter applicants once they are enrolled at that institution. The two-way tables that show the organization of variables prior to

the Chi-Square tests can be found in Appendix E.

Conclusions regarding whether there was evidence of a significant relationship between variables were determined by comparing the p -value to the following:

- | | |
|------------------------------------|--|
| • $p\text{-value} > .10$ | No evidence of significant relationship |
| • $.05 < p\text{-value} \leq .10$ | Some evidence of significant relationship |
| • $.01 < p\text{-value} \leq .05$ | Moderate evidence of significant relationship |
| • $.001 < p\text{-value} \leq .01$ | Strong evidence of significant relationship |
| • $p\text{-value} \leq .01$ | Very strong evidence of significant relationship |

The expected value for each cell was organized into a two-way table in which each cell is equal to $(\text{row total} * \text{column total})/n$, where n is the total number of observations included in the table (Chase & Dummer, 1992). The calculations of the twenty-four Chi-Squared tests can found in Appendix F.

Summaries of the findings were combined with graphical analysis while the researcher is “looking for emergent patterns in the data” (Patton, 2002). For this study both an inductive analysis, in which patterns, themes, and categories were explored during the researchers interaction with the data, and a deductive analysis, using an existing framework, were conducted. Based on the typology, correlations and conclusions were made and inferences were formed to a larger population.

The responses were organized into groups and the number of and percentages were determined. The SurveyMonkey collection tool and the IBM SPSS Statistics for Mac were used as the analytical platform for the survey responses and statistical analysis. The following table illustrates the planned data analysis method for each question of the survey:

Table 13. Proposed Data Analysis Methods

Research Questions	Survey Question	Question Type	Data Analysis Method
	1.1 Consent to Participate	<i>Not applicable</i>	<i>Not applicable</i>
How do the attitudes or perceptions of admission counselors toward applicants from cyber-charter schools vary according to their employing institution's characteristics?	1.2 Respondent Role	Categorical Scale	<i>Not applicable</i>
	1.3 Respondent Years of Experience	Categorical Scale	<i>Not applicable</i>
	1.4.1 Institution Location	Categorical Scale	Chi-Square and two-way table via SPSS
	1.4.2 Institution Size	Categorical Scale	Chi-Square and two-way table via SPSS
	1.4.3 Institution Affiliation	Categorical Scale	Chi-Square and two-way table via SPSS
	1.4.4 Institution Selectivity	Categorical Scale	Chi-Square and two-way table via SPSS
	1.5 Institution Degree Programs	Categorical Scale	Chi-Square and two-way table via SPSS
	1.6 Cyber-charter Applications in 2012-13	Categorical Scale	Chi-Square and two-way table via SPSS
To what extent does the differences in the admission policies that college admission counselors enact for applicants from cyber-charter school differ from those enacted for traditional students?	2.1 Admission Differences: Timeline	Affirmative/Negative	Percentages Analysis via SPSS
	2.2 Admission Differences: Documentation	Categorical Scale	Percentage Analysis via SPSS
	2.3 Admission Differences: Staff	Affirmative/Negative	Percentage Analysis via SPSS
	2.4 Admission Differences: Other	Narrative	Coding: Preset and Emergent
To what extent do college admission counselors have different expectations for the success rate of applicants from cyber-charter schools compared to applicants from traditional high schools?	3.1 Expectation for Success: Overall	Likert-type Rating Scale	Chi-Square and two-way table via SPSS
	3.2 Expectation for Success: GPA	Likert-type Rating Scale	Chi-Square and two-way table via SPSS
	3.3 Expectation for Success: Retention	Likert-type Rating Scale	Chi-Square and two-way table via SPSS
	3.4 Expectation for Success: Social Coping	Likert-type Rating Scale	Chi-Square and two-way table via SPSS

The collection of the characteristics of the respondents and their institutions in the first section of the survey permitted an analysis to occur to determine if there were differences in the expectations of cyber-charter success based upon the respondent's institution's features, their years of experience, or whether they made the admission decisions independently or unilaterally. The categorical nominal variables were the characteristics of the respondent's institution (Survey questions 1.1 -1.5: size, location, affiliation, selectivity, Carnegie Classification) and the measurement variables were the perceptions and attitudes of the admission counselors (Survey questions 3.1-3.4).

The second section of the survey explored the cyber-charter applicant admission policies that might be practiced at each institution and how they might differ from the institution's process for reviewing applications from traditional high school students. Respondents were asked "Yes/No" questions that can also be used to measure variables such as timeline and staff differences that could also be used as nominal variables. However this section did require a type of data analysis that is different than the other survey questions as the respondents are given the opportunity to provide a written response about other admission practice differences that the respondents may enact for cyber-charter school students as opposed to traditional students. Categorizing the narrative data (coding) was done in order to identify themes or patterns and then organize them into an intelligible pattern for analysis (Miles, 1994). Abbreviated codes were used in order to organize the data into categories and may include sub-themes.

The theoretical nature of the categories and themes that were ultimately utilized caused the preset categories to be limited. Instead, a combination of preset and emergent categories was developed after the researcher has worked with the data. It was anticipated that the categories might change as definitions could be adjusted and new categories were created in order to

accommodate data that may not already fit into the presets. The researcher examined this narrative data to determine if there were themes that developed within categories, into larger categories, into relative importance, and those that might have shown a relationship (Miles, 1994; Patton 1990).

The final section of the survey (3.1-3.4) requested information on the attitudes of admission/enrollment officers about applicants from cyber-charter schools. There have been a number of different methods used to measure personality and character traits (Likert, 1932). Collecting data on attitudes through qualitative research remains a difficult task. Likert's development of attitudinal scales for measuring character and personality traits continue to assist social researchers decades after their development. In the case of this research, Likert-type questions (Clason & Dormody, 1994) were developed. They are Likert-type as opposed to purely Likert as they were single questions that use some traits of the original Likert scale response options and because there was no attempt by the researcher to organize and combine the responses into a single scale (1994). It is understood that Likert-type ordinal level of measure of rank order (Much lower to much higher) used in this section was employed without the ability to presume equal intervals between the intervals (Blaikie, 2003; Clegg, 1995; Pett, 1997). The researcher agrees with Knapp (1990) that the sample size and distribution outweigh the importance of the standard levels of measurements when examining these statistics.

3.6 VALIDITY AND RELIABILITY

The extent to which a survey gathers the information on what it was intended to study is the content validity (Borg & Gail, 1989). Pretesting of this survey via a pilot study to maximize

validity is recommended (Bourque & Fielder, 1995) and was conducted with three professional colleagues of the researcher in December, 2013. These three test respondents are all currently employed as high school counselors, but all three have prior professional experience as college admission counselors who were directly responsible for making admission decisions. They were asked to complete the survey and respond with the premise that they were still making admission decisions at their former institutions. All reported that the questions were clear and the survey was easy to use. The limited nature of this pretest was due to the design of the study being based on previous successful research (Jenkins, 1998; Jones & Gloeckner, 2004).

The extent to which the results of the survey can be repeated over time refers to the reliability of this instrument (Borg & Gail, 1989). It is very likely that the responses of the admission officers first surveyed for this study will change over time as it is expected that there will be a steady increase in cyber-charter enrollment and that the admission officers will have more contact with this population over time. It is expected that the degree to which responses could be consistent and dependable over time will indeed fluctuate, but only as a natural progression resulting to increased exposure and experience with cyber-charter school students. However a snapshot of the 2014 perceptions and attitudes can prove to be valuable information and the basis for making educational decisions and policies.

3.7 ETHICAL CONSIDERATIONS

This survey relies on the voluntary participation of the sample population and therefore no respondent was under pressure or obligation to respond. On the first page, the full survey asked the respondent to indicate his or her informed consent and agreement of participation for each

respondent. The University of Pittsburgh Institutional Review Board approved this consent form on January 15, 2014. As the data from each respondent contained no identifying information other than very general information about the institution (size rounded to the thousandth, broad identification of setting, etc.), there was no evidence that any part of the sample population will be at risk of harm. Anonymity existed as the researcher did not know the identity of the respondent beyond their membership in PACAC.

4.0 RESULTS

4.1 INTRODUCTION

The purpose of this study was to examine the attitudes and perceptions of college admission counselors about cyber-charter school applicants to post-secondary institutions in the Commonwealth of Pennsylvania. The first goal of the study was to use survey data to assess the variations of admission policies used for admitting cyber-charter applicants to post-secondary institutions in the Commonwealth of Pennsylvania. The study also explored the attitudes and perceptions of admission counselor's expectations for success of cyber-charter applicants. Finally, the study investigated to what extent the characteristics possessed by an institution of higher learning affect the perceptions of an admission officer employed at this same institution. As noted in the prior chapter, the study used qualitative methods to collect survey data from respondents in order to answer the three research questions. The following sections of this chapter include a discussion of the findings relating to each research question and the conclusions that can be drawn from these findings. The raw data used to form these conclusions can be found in Appendix D, E, and F of this document.

4.2 FINDINGS

Data were collected from a survey containing questions that used categorical scales and rating scales. An email with a link to this Internet-based survey was sent to 1000+ admission counselors in Pennsylvania on February 11, 2014. The survey produced 207 responses during the period of February 11 to February 25, 2014, which is approximately 20.7% of the survey population.

It is important to note that not every question in the survey required an answer and therefore the number (*n*) of responses may not always be consistent with the 207 respondents who began the survey. The table below illustrates the survey response rate for each question.

Table 14. Survey Question Response Rate

Survey Question	Response <i>n</i>
1	207
2	181
3	126
4	126
5	125
6	115
7	114
8	114
9	133

The prevailing assumption is that higher response rates yield more statistically accurate results. However, a number of studies have challenged this premise and provide support to continuing to conduct a valid data analysis with lower response rates. Visser, Krosnick, Marquette, and Curtin (1996) found that surveys with lower response rates were able to yield more accurate measurements than did surveys with higher response rates. Additional research (Keeter, Kennedy, Dimock, Best, & Craighill, 2006) supported the acceptability of lower

response rates when finding that, in 77 out of 84 comparisons, a survey with a lower response rate can still yield results that were statistically indistinguishable from a survey with a higher response rate. Based on this research's response rates, the data analysis for this study was conducted as planned.

4.2.1 Contextual Findings

Data were collected that provided perspective to the overall study and these contextual findings were found to be some of the most interesting discoveries of the study. For example, the respondents were first asked if their role involved making decisions as a committee, unilaterally, or if his admission duties did not involve making admission decisions. The first noteworthy finding related to the admission counselor's role was that almost a quarter of the respondents ($n=45$, 24.85%) are not directly responsible for reviewing applicant information at their post-secondary institution. The researcher anticipated this finding due to his previous professional experience in the field of college admissions. His prior knowledge led to the inclusion of this question in the study, as well as the requirement that it be answered before proceeding to the next question in the survey, so that the responses of these respondents could be exempted from the data analysis. This finding also serves to illustrate the nebulous nature of the term "admission counselors," as many professionals with this title do not make admission decisions due to job responsibilities that relate more toward recruitment, marketing, enrollment-related technological innovation, application processing, and administration. This detail could be quite important to applicants interacting with a particular college's "admission counselor," as it is quite possible that the staff member that they are making great efforts to impress may not in fact be responsible for or even contribute at all to the admission decisions.

Another related finding was the unanticipated number of respondents who indicated that admission decisions are made unilaterally ($n=62$, 34.25%), as opposed to those who make admission decisions as part of a larger committee of admission professionals ($n=74$, 40.88%). This information could be a disappointing to the post-secondary applicants who anticipate their applications materials being reviewed, discussed, and debated by a team of professionals rather than a lone decision-maker, especially since many post-secondary institutions use their intensive and collaborative decision-making as a marketing tool to attract applicants. This researcher has been part of the post-secondary admission community and school counseling community for eighteen years and has never encountered a post-secondary institution that would flaunt the unilateral review of applicants, yet almost half of the respondents indicated that they conduct solitary reviews of applications. The following figure is useful in illustrating this:

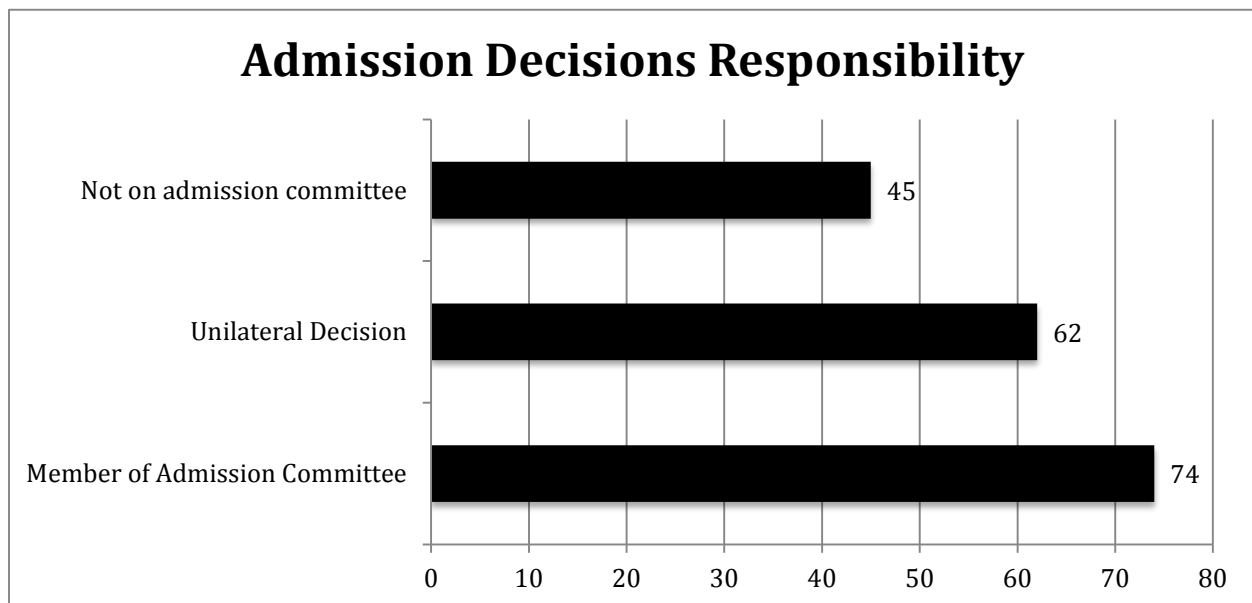


Figure 4. Survey Data: Question 2

Data collected on the number of years of experience of admission counselors produced interesting findings. The common perception, which is also often reinforced by deliberate marketing and recruitment strategies, is that only the most learned and experienced professionals

at that institution make the admission decisions. However, this study found that admission counselors skew largely towards having fewer than 5 years of experience. A large number of the respondents ($n=50$, 39.68%) have less than 5 years in the admission field and only 38 of the 126 (30.15%) respondents indicated that they have more than 11 years in the field. The following figure is useful in illustrating these findings.

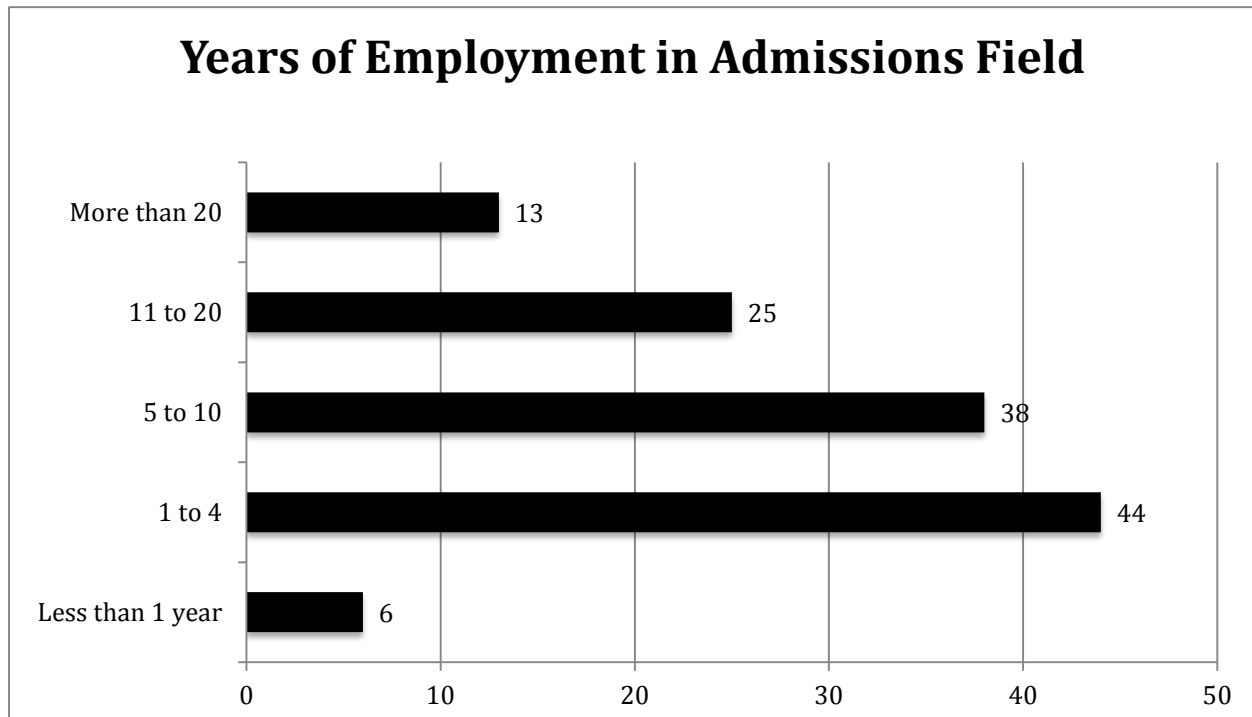


Figure 5. Survey Data: Question 3

Perhaps the less experienced staff members are more likely to be assigned to the tedious duty of reading the thousands of admission applications received at that college. While vitally important to the overall process, this researcher's own previous professional experience contributes to the conclusion that the processing of this much paperwork is considered entry-level work in many admission offices.

The respondents to this study were asked to indicate how many cyber-charter admission applications they received during the past school year (fall, 2013 enrollment). After reviewing

the literature and ascertaining the increasing frequency at which students were choosing to attend cyber-charters, there were unexpected findings on their post-secondary admission practices. Nearly half of the respondents ($n= 55$, 47.83%) indicated that their institutions received less than 25 applications from cyber-charter applicants in that enrollment year. This was unanticipated given the increasing enrollment in cyber-charter education, but the low graduation rate at these institutions (58%) may be the explanation (PA Department of Education, 2012). The conclusion is that cyber-charter students are not matriculating to college at the same rate as traditional students because not as many are meeting the high school graduation requirements. The following figure illustrates the surprising distribution of this data.

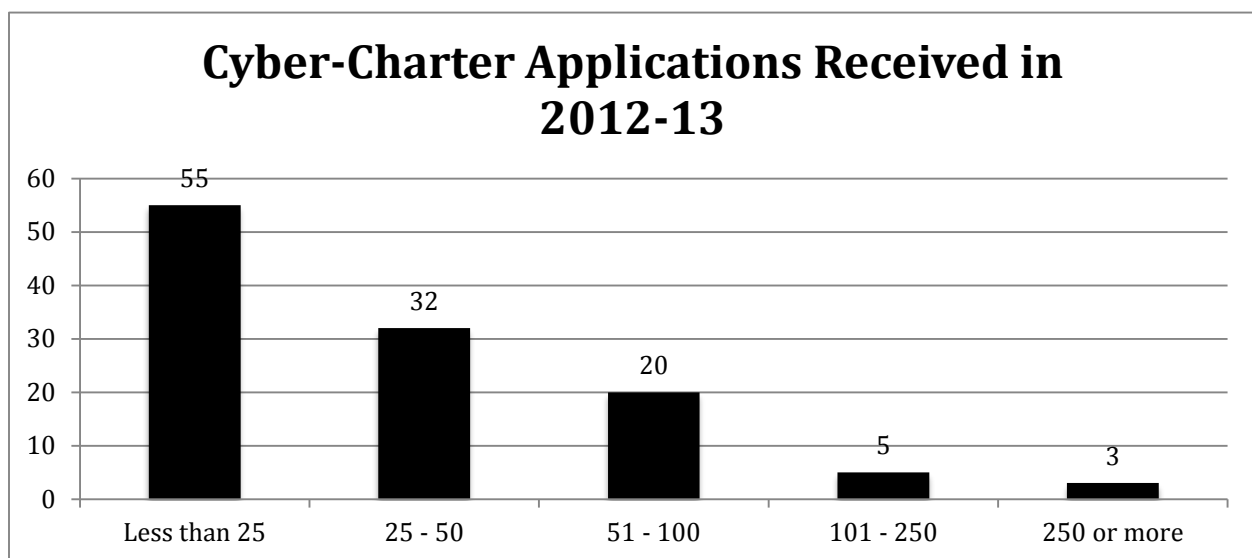


Figure 6. Survey Data: Question 6

These findings raise the questions about whether inexperienced admission counselors are unilaterally making admission decisions for applicants. For example, a college graduate in the class of 2013 could be making unilateral decisions about thousands of applicants for the 2014-15 academic year. The conclusion is that the common perception of an admission committee being comprised of a collaborative group of veteran professionals, which is often reinforced via

presentations and marketing materials, may not always match the 21st century reality of how admission decisions are actually being made.

4.2.2 Findings Relating to Research Question 1: Differences in Admission Procedures

This next section discusses the findings related to research question 1: *How do the differences in the admission policies that college admission counselors enact for applicants from cyber-charter school differ from those of traditional high school applicants?* A percentage analysis was conducted to determine if there were differences in the admission policies and procedures using the responses ($n=114$). The respondents were offered ten different types of admission-related documentation as examples through which a respondent could indicate differences, but it was found that the documentation required of all applicants from any type of high school origin is identical in nearly every case ($n=108$, 94.74%). Similarity of this magnitude was very unanticipated, as was the underutilization of the opportunity to provide narrative information explaining possible differences. The limited responses to this section ($n=6$) were coded using emergent categories that indicated that three of the respondent's institutions asked for additional curricular information (CUR: $n=3$) or interviews (INT: $n=3$) from cyber-charter applicants. The same 114 respondents who provided information on admission documentation also provided data on the admission timeline and admission committee used for cyber-charter and for traditional graduates. These findings indicate a very high degree of consistency relating to the admission timeline ($n=113$, 99.12%) and committee ($n=108$, 94.74%) used to review both type of applicants. The following figure is useful in illustrating the overwhelming consistency of responses:

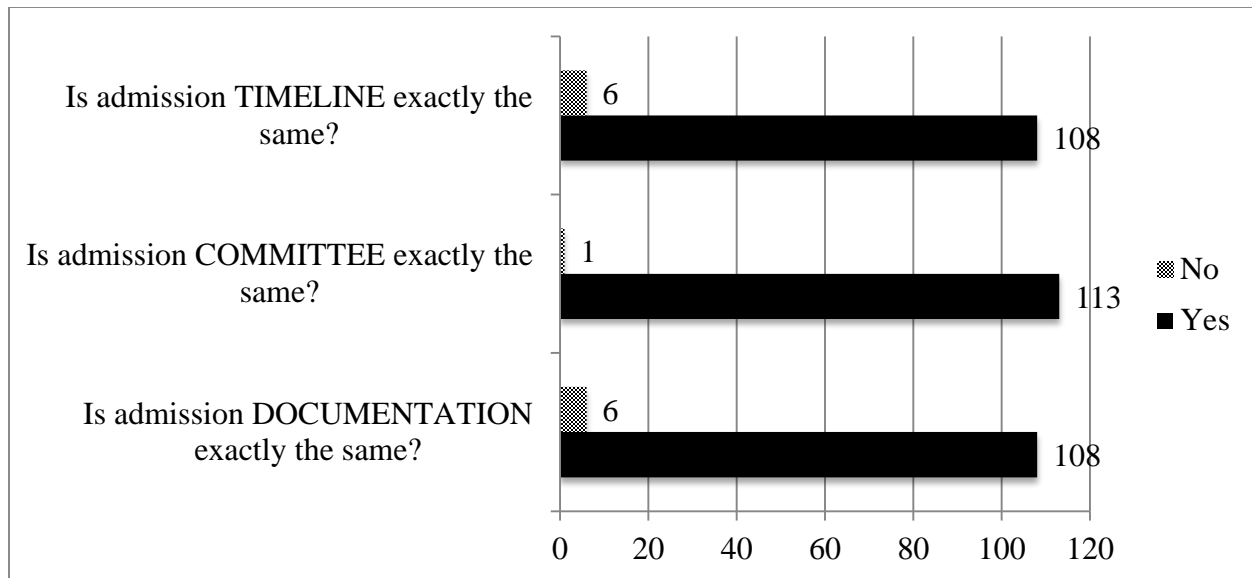


Figure 7. Survey Data-Questions 7 and 8

There was a near consensus among the admission counselors that the different parts of the admission review process are similar for each type of applicant. Since there are such parallels reported in the procedures, it is likely that this similarity was caused by a past phenomenon. The review of literature conducted prior to this study provided valuable clues relating to homeschooled students. The conclusion is that cyber-charter students own a debt of gratitude to the homeschooled students who struggled with gaining equality over the past several decades and who likely caused the near standardization of the admission process for all applicants.

4.2.3 Findings Related to Research Question 2: Attitudes and Perceptions of Admission Counselors

The next section discusses the findings related to research question 2: *To what extent do college admission counselors have different expectations for the success from cyber-charter schools compared to applicants from traditional high schools?* Answering the second research question required an examination of the 133 responses that were provided via the Likert-type rating

scales. The areas used to evaluate the perceptions and attitudes toward the cyber-charter applicants were overall success, freshmen year grade point average, freshmen year retention rate, and social coping. The figure below assists with summarizing these findings:

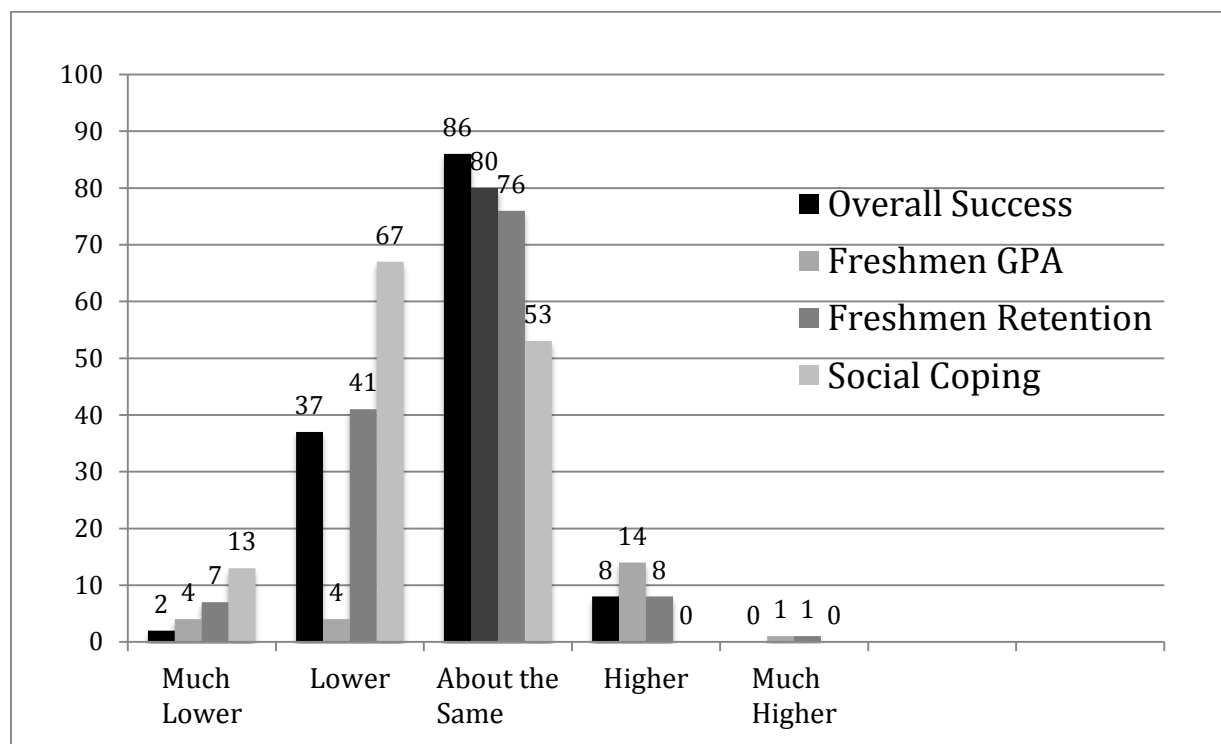


Figure 14. Survey Data: Question 9

Respondents were first asked to indicate whether their expectation for overall success was the same for both cyber-charter and traditional applicants. Almost two-thirds ($n=86$, 64.66%) of the respondents indicated that they expected cyber-charter applicants to perform “About the Same.” What should be of great concern to the cyber-charter applicant is that 29.32% ($n=39$) of respondents indicated that they expected “Lower” or “Much Lower” overall success, only 6.02% ($n=8$) indicated “Higher,” and none of the respondents ($n=0$, 0%) indicated that they felt that the overall success would be “Much Higher.”

The next area involved the admission counselor’s expectations for grade point average (GPA). The results of this question were similar to the previous results that explored overall success as 60.15% ($n=80$) of the respondents indicated that they expected cyber-charter

applicants to perform “About the Same” in terms of GPA. More than a quarter of the respondents ($n=38$, 28.57%) indicated that they expected “Lower” or “Much Lower” GPAs from cyber-charter applicants, while only 10.53% ($n=14$) indicated higher expectations. Merely 0.75% ($n=1$) indicated that they believed the freshmen GPA of cyber-charter applicants would be “Much Higher” than that of a traditional applicant.

The admission counselors were also asked to respond with their expectations for retaining cyber-charter school applicants at their institutions during their freshmen year as compared to retaining traditional high school applicants. More than half ($n=76$, 57.14%) of the respondents indicated that cyber-charter applicants were expected to stay enrolled at “About the Same” rate after their freshmen year. There was an increase in the negative perception percentages from the two previous measures, as now more than a third ($n=48$, 36.08%) of respondents indicated that they possessed “Lower” or “Much Lower” expectations for cyber-charter applicants. The responses indicating that cyber-charter school applicants would be retained at a “Higher” or “Much Higher” level were uncommon ($n=8$, 6.06% and $n=1$, 0.75% respectively).

The most notable results concerned the expectations for social coping. The number of respondents indicating that they felt that cyber-charter students would perform “About the Same” ($n=53$, 39.85%) dropped significantly from the previous measures of success, while there was a significant increase in the “Lower” ($n=67$, 50.38%) and “Much Lower” ($n=13$, 9.77%) responses. The most distinct results were the 0% ($n=0$) of respondents who indicated that they believe that the social coping of cyber-charter applicants would be “Higher” or “Much Higher” than the traditional applicants.

This study did not involve research into whether admission counselors act upon their negative attitudes and perceptions when reviewing applicants. Nevertheless, these findings may

have implications for the cyber-charter applicant who is considering whether the high school that they have chosen to attend will have an effect upon the post-secondary admission decision.

4.2.4 Findings Related to Research Question 3: Characteristics of Institutions

This final section discusses the findings related to research question 3: *To what extent do the attitudes or perceptions of admission counselors toward applicants from cyber-charter school vary according to their employing institution's characteristics?* Survey questions were used to categorize the characteristics of the institutions where the respondents are employed and are responsible for making admission decisions. The respondent was asked to select the from a dropdown menu that contained both nominal and ordinal pre-set categories. The categories for these questions were standard for the admission/enrollment industry (College Board, 2013) or were modified adaptations of the 2004 Jones and Gloeckner survey (see Appendix B).

Respondents were first asked to provide categorical data indicating the location of the institution at which they are employed as admission counselors. More than half of the respondents were from suburban institutions ($n=65$, 51.59%), and approximately a quarter indicated that they were from rural institutions or urban institutions ($n=33$, 26.19% and $n=28$, 22.22% respectively). These results are largely consistent with the location-related data that post-secondary institutions in PA self-report to The College Board (2013).

When asked to provide data on the characteristic of institutional size, the majority of responses ($n=89$, 70.63%) indicated that they were making admission decisions at institutions of less than 4,999 students. Very few respondents ($n=8$, 6.35%) indicated that they were employed at very large institutions or from large institutions ($n=8$, 6.35%). It is important to note that there were more respondents from the category of "Large" institutions ($n=16$) than the number of

institutions in Pennsylvania that self-report themselves as large institutions ($n=6$) according to The College Board (2013). It is possible that the data might include duplicate responses from admission counselors employed at the same exact institutions, but it is also likely that the data includes answers from different respondents at different campuses of the same larger institution. For example, two of the post-secondary institutions from this short list of six very large schools in Pennsylvania (The Pennsylvania State University and the University of Pittsburgh) have 29 different campuses between the two of them (College Board, 2014). The 16 responses from larger institutions could easily have been from admission counselors employed across the state at these branch campuses.

Respondents were also asked to provide categorical data indicating the affiliation of the institution at which they make admission decisions. More than half of the respondents ($n=65$, 51.59%) indicated that they were employed at private institutions, more than a quarter ($n=32$, 25.40%) indicated that they were from religiously affiliated institutions, and the other quarter ($n=29$, 23.02%) indicated they were from a state or state-related institution. The sample population appears to be again relatively consistent with the actual ratios of affiliation identification for PA colleges as the research indicates that 43.3% ($n=100$) identify themselves as private (College Board, 2014).

Over half of the respondents ($n=63$, 50.81%) indicated that their school was somewhat selective while 29.83% ($n=37$) indicated that their institution was less selective or had open admissions. Only 19.35% ($n=24$) of respondents indicated that their institution was very or most selective. These data indicates that the overall survey contains responses from admission counselors employed at a wide variety of institutions in terms of selectivity, and distribution indicates that the conclusions reached by this study can be useful to high school applicants

interested in applying to the wide variety of institutions in Pennsylvania from local community colleges to Ivy League.

Finally, the respondents were also asked to use the Carnegie Classifications to categorize their institution. The vast majority of respondents ($n=114$, 94.40%) indicated that they are employed at institutions that grant at least a bachelor's degree while only 5.6% ($n=7$) indicated that they were from an associate's college or special focus institutions (theological, arts, etc.).

In order to discover if there is a relationship between the two categories of variables (demographics of institution and the attitudes/perceptions of the admission counselors), the Chi-Square test for independence was conducted. The two-way tables that show the organization of these variables prior to the Chi-Square tests can be found in Appendix E. The full calculation of the Chi-Square test statistics and p -values can be found in Appendix F. Twenty-four different data analyses were conducted to determine if any such relationship existed. There is no evidence that an institution's location, size, selectivity, or the degree programs offered might affect the attitudes and perceptions of the admission counselors charged with making admission decisions for that institution when considering cyber-charter school applicants. However, this study did produce one finding that could relate to the characteristic of a post-secondary institution. A noteworthy number of admission officers employed at state or state-related institutions ($n=19$, 58%) have lower freshmen retention expectations for cyber-charter school students compared to colleagues at institutions with other affiliations. The related Chi-Square test statistic is 12.951, which yields a p -value of .012. This result is statistically significant as it enables the rejection of the null hypothesis and provides evidence of a connection between the affiliation of a post-secondary institution and the admission counselor's expectations for the freshmen retention.

4.2.5 Findings Summary

Cyber-charter school applicants were not found to be at a procedural disadvantage during the post-secondary admission process. However, the key finding of the study indicates that a significant number of admission counselors do not believe that the cyber-charter applicant will perform as well as a traditional high school applicant upon enrollment at the post-secondary level. The characteristics of a post-secondary institution were found to have little affect upon the admission counselor's attitudes. An unexpected finding from the categorical data collected from the respondents, many of whom possess less than five years of experience, indicated that nearly as many admission counselors in Pennsylvania make unilateral decisions as those who do so in an admission committee. The findings revealed that applicants to post-secondary institutions in the Commonwealth of Pennsylvania might face negative attitudes and perceptions during the admission process because of their choice to attend a cyber-charter school.

5.0 CONCLUSIONS

5.1 INTRODUCTION

Chapter 5 discusses the implications of this study, provides recommendations for further research, and offers concluding remarks. It is important to note that the following interpretations should not be considered to be opinions or beliefs of the Pennsylvania Association of College Admission Counselors (PACAC). While the members of this organization were used as the survey population, their responses were not collected to be indicative of this organization's goals or philosophy. The insights and conclusions reached by this inquiry are solely those of the researcher. However, when random sampling such as this is used, the responses can be used to make generalizations to other members of a larger population (Newsed, Huff, & Munro, 1998). In this case, the inferences from this study are indicative of the attitudes and perceptions of post-secondary admission counselors across the Commonwealth of Pennsylvania.

5.2 IMPLICATIONS

The implications of this study are organized according to the research questions. These implications affect many different stakeholders involved with online education, including students and parents as educational consumers and public school districts struggling to meet the

financial obligation that comes from supporting residents choosing to pursue cyber-education. The implications may also be important for cyber-charter schools wishing to make program changes that might contribute to high student achievement and more positive outcomes for graduates, for taxpayers across the state who support the public school systems, and for policymakers who monitor and pass legislation related to online learning.

5.2.1 Research Question 1 Implications: High Degree of Consistency Found in Admission Processes Despite Applicant's High School of Origin

This research study provided evidence that the admission review process faced by applicants is essentially the same despite the type of high school the applicant might be originating from. The implication is that cyber-charter school students should not worry that they will be at a disadvantage during the post-secondary admission process due to any procedural factors. In terms of the college admission procedures to be followed, the decision to choose the cyber-charter high school option does not produce a negative outcome. This news should come as a relief to the 36,000+ students who are choosing to attend cyber-charter education in Pennsylvania. It is important to note that all types of applicants should still be carefully reviewing the procedures and documents required by each institution that they are interested in attending to be sure that the applicant is meeting any/all criteria that might exist.

The reason for the near standardization of the post-secondary admission process across the state is likely not a function of coordination or cooperation among the participants in this research. Other than legislation related to discrimination, there is no agency in Pennsylvania that monitors the admission process at post-secondary institutions to ensure consistency. As the review of the literature has shown, the similarities in the admission procedures across the state is

likely due to the trail that was blazed by homeschooled students, parents, advocates, and home-schooling legislation over the past several decades. Cyber-charter students are benefiting from post-secondary institutions having received an influx of homeschooled applications over the past several decades.

Prior to the actual admission application process, cyber-charter students may wish to examine whether or not a college has a different policy or procedure as criteria for determining if the student wishes to actually apply to the institution in the first place. Whether or not additional requirements are placed upon the cyber-charter applicant could possibly be an indication to that young person if they are looking at a more “cyber-friendly college” or if it might perhaps be an institution that is not as receptive to applicants from online schools. Finding a good match may be a little more work for the cyber-charter student, but it should still be attempted given the importance of this decision.

Given the enormous pressures placed upon admission and enrollment staff for securing the best possible applicants that they can, the decision whether or not to create additional steps in the process for a certain type of applicant should be a well thought out decision by that institution’s management and executives. The implication is that if differences exist in the procedures, some sort of phenomenon caused them. The creation of extra requirements, barriers, or even quotas for cyber-charter students would likely be a policy decision that would likely be based on similar measures of success as those explored in answer to the second research question.

5.2.2 Research Question 2 Implications: Negative Perceptions of Cyber-Charter Applicants

Cyber-charter high school applicants may face substantial negative perceptions during the post-secondary admission process from the individual admission counselor who reviews their application materials. While many admission counselors believe that cyber-charter applicants will perform about the same as traditional high school applicants, these findings appear to suggest that the high school a student attends could have an effect upon the admission decision. The implications of these findings are serious for all stakeholders, but should perhaps be of the most concern to the student and family considering whether or not to attend cyber-charter education.

There is no simple classification as to who exactly chooses a cyber-charter school and why they might do so. The online population of students tend to be a more itinerant student group with great diversity of races, classes, geographic locations, religious beliefs, genders and gender associations, abilities, educational beliefs, cultures, learning styles, computer skills, and even general interest in education (Buddin & Zimmer, 2005). No matter the specific reasons, the family unit making this major decision is hoping that the cyber-charter education will be “better” than their current situation. The information from this study likely complicates this decision further as the family unit has to consider the idea that while cyber-charter education might be the solution to their immediate problem, it may create a negative outcome in the future if the student is considering post-secondary education. The implication is that more and more students should re-consider their decision and decide if it would be better to work through the issues facing them now in order to avoid serious issues in the future. Students and families should seek out advice and information from all types of resources when making this important choice so that it is best

decision for their particular situation.

Establishing the initial admission standards for each institution's enrollment year often starts at the highest levels, including the chancellor or president and board of trustees. In some parts of the country, a local government, accreditation board, and even a state's higher education commission can be involved with developing the preliminary admission policies and standards (Breland, Maxey, Gernand, Cumming, & Trapani, 2002). As with many large organizations though, the actual management of students admitted to a post-secondary organization trickles down from governing boards to chief executive officers to deans to directors of enrollment management to the admission committees only to finally fall on the shoulders of an individual admission or enrollment officer. These admission professionals, who can act unilaterally or be organized into small committees to vote upon admission, are ultimately the actual decision-makers charged with the responsibility of reviewing standardized test scores, examining academic transcripts to determine GPAs, reading college admission essays and teacher recommendations, and conducting interviews.

While some latitude might be granted when reviewing admission materials, the admission counselors are certainly given guidelines and expectations that have been set well in advance. The hope of the applicant is that he/she is being considered according to these guidelines without any preconceptions. However, the admission review process involves not just evaluating the applicant's materials according to the set guidelines, but also evaluating the applicant in context of the high school they attended, whether the admission counselor has visited the high school and his impression of the visit, whether the admission counselor may have ever met personally with the applicant, whether the applicant's parent attended the college, and possibly a number of other unempirical factors. The implication is that the applicants may not be always appraised in ways

that are rooted in the strictest and most precise of evaluative methods.

An individual admission counselor's attitudes toward the cyber-charter applicant could be generated from that individual's own personal thoughts, research, and experiences. The reason for the formation of these beliefs and whether or not they are warranted was not a focus of this research study, but the review of literature conducted prior to this study may provide clues to the factors that might be responsible. One such reason could simply be that the admission counselor may be aware of the lower academic achievement scores and graduation rates of the cyber-charter students in PA. The overall higher achievement of the traditional high school student as opposed to the charter and cyber-charter student has been widely covered in the educational community and in the media. The massive amount of funding supporting cyber-charter education also makes it a sensitive issue for a large number of stakeholders and the admission counselor could have easily have become engaged in meaningful personal interactions relating to it.

There is a great deal of information on this topic in the public domain and may begin to influence the admission counselor's opinions the moment the application is opened and the high school of origin is reviewed. As the applications from cyber-charter schools are still in the minority of the overall application pool, the admission counselor may be wondering, "Why did you chose a cyber-charter school?" when looking over the materials. It is unlikely that the applicant would be under any obligation to overtly explain this decision via a question on the application, but unless the applicant has specifically written an essay or personal statement providing this information then the admission counselor is left to his/her own thoughts as to why this rather significant educational choice was made. Therefore, the applicant may wish to pre-emptively communicate with the college to discuss the reasons and provide context. The decision to openly provide this information as part of the initial admission materials could serve to level

the playing field for the applicant by removing cause for concern, but it could also be a way of highlighting a special circumstance that necessitated online studies. Reason for attending that could be provided as beneficial context for the reviewer might include serious medical issues, a once in a lifetime international travel opportunity, or a highly intensive pre-career program such as ballet training.

Admission counselors at post-secondary institutions across Pennsylvania have the most negative perceptions of the social coping skills of cyber-charter applicants. As most colleges are highly social environments that also operate on firm time schedules, the social coping of an applicant may be of concern since he/she could have previously lacked daily interaction or may lack the ability to follow a rigid schedule due to enrollment in an asynchronous online environment. Post-secondary institutions set their own priorities for educational initiatives, but student engagement, interaction, and responsibility are usually stressed significantly at institutions of higher learning. Cyber-charter students may certainly possess the ability to socially cope in college, but it appears that simply attending an online program creates a negative perception. Cyber-charter students may wish to address these concerns pre-emptively with an institution.

Unlike public school districts, cyber-charter schools can decline a student's request for enrollment and therefore have control over the population enrolled at their institution. One has to wonder then if the cyber-charter schools themselves may bear some responsibilities for the negative perceptions held by admission counselors. The existence of cyber-charter schools is dependent upon students enrolling at those institutions, which again makes the rapid increases in online enrollment in the face such low achievement and graduation rates all the more perplexing. Since the cyber-schools need to attract students to survive, this study's finding should be of great

concern to the cyber-charter governing boards. Cyber-charter governing boards should be developing a strategy for more positive student outcomes not only for enrollment and survival purposes, but they should be doing so as they are ethically bound to provide students with a quality educational experience. Strategies should be created for increasing student achievement, student graduation rates, and a better connection between the cyber-charter students and the post-secondary admission counselors. Creating opportunities for cyber-charter students to meet with admission counselors at a central location could create a sense of community and provide face-to-face interactions that could be valuable for both parties. Highlighting the social aspects of cyber-education, some of which do hold school dances and communal events, via publications could help to reduce some of the social-related fears of admission counselors. Training the cyber-charter career and college advising staff to form connections with post-secondary institutions and encouraging them to become part of Pennsylvania's school counselor professional organizations could also duplicate these relationships to the benefit of students.

There are hardworking and quality students who attend cyber-charter schools who are impacted by these negative perceptions. Cyber-schools should reach out the post-secondary institutions in order to inform them that they are far from a homogenous grouping of students. Since each admission counselor brings his individual perceptions as well as the institution's strict criteria to the review process, educating the admission counselors on the variety and complexity of the cyber-charter population could begin to reduce some of the negative perceptions.

5.2.3 Research Question 3 Implications: Negative Perceptions Not Related to Institution's Characteristics

This research study found that there is no evidence that an institution's location, size, level of

selectivity, or the degree programs offered at the institutions are associated with variations in the attitudes and perceptions of the admission counselors charged with making admission decisions for that institution. The implication is that cyber-charter students should not feel bound to select from a smaller menu of post-secondary options due to any inherent feature of a college. They should feel free to pursue education in any type of community (location), with any number of enrolled students (size), that offers any level of rigorous admission standards (selectivity), or to a post-secondary institution that offers any level of education (degree programs offered). There remains a general concern among admission counselors that the cyber-charter applicant may not perform as well as the traditional applicant, but these findings do not generally appear to be related to the above characteristics. This information can be extremely valuable to the cyber-charter applicant and to the student who might be considering cyber-charter education in the first place.

There was a noteworthy finding related to an institution's affiliation as more than half of the admission counselors employed at state or state-related institutions in Pennsylvania have lower expectations for the cyber-charter freshmen retention rate. In Pennsylvania, there are 14 state colleges and 4 state-related institutions, which means that they receive taxpayer funds to assist with operations (College Board, 2014). The reason for these more negative attitudes was not a focus of this research study, but it is important to note that most of the institutions in the state and state-related category (14 of 18) are under the oversight of the Pennsylvania State System of Higher Education (PASSHE). While it is possible that these more negative attitudes and perceptions among these admission counselors might originate in their own individual professional and personal experiences, the implication of so many indicating this particular viewpoint is that increasing the freshmen retention rates is already part of an initiative for the

PASSHE system at large.

5.3 LIMITATIONS

Not every survey question required that the respondent provide an answer in order to move forward. This feature caused a reduction in the number of individual question responses from the total respondents. This occurrence is most evident when reviewing the survey data from questions 2 to question 3. Only 126 answered question 3 as opposed to the 181 that answered question 2, a reduction of 30.38%. The reason for this drop is unknown, as it would seem unlikely that the respondent was experiencing ennui already at this early point in the survey. It is possible that the respondents balked at providing the demographical data, as they could have been concerned that they could be identified and held accountable in some way for their responses.

5.4 RECOMMENDATIONS FOR FUTURE RESEARCH

This study produced a number of interesting findings, but more research on the educational ramifications of choosing cyber-charter high school education needs to occur. If the phenomenon of rapidly increasing cyber-charter enrollment continues, the importance of having research available that might support or dispute such a decision will be greater as well. The following are suggestions for additional research that might be extremely valuable to all of the various stakeholders who are involved in the cyber-charter school discussion.

The average SAT scores of the traditional applicant are readily available and the ability to compare this to the average SAT of the homeschooled student became possible as this population matriculated into college in greater numbers in the last several decades. As the cyber-charter school students begin apply to colleges in greater numbers, collecting and analyzing this data would be a qualitative method of comparing and contrasting the different populations. Cooperation with institutions of higher learning or larger organization such as the College Board would seem to be key to examining precise data of this sort.

Despite 34,694 students being enrolled in cyber-charter high schools the previous school year (Commonwealth of PA, 2013), very few of the respondents (6.96%) indicated that their institutions received more than 100 applications from cyber-charter school applicants in the 2012-13 enrollment year. This finding could provide the basis for a great deal of future research, as the literature on the career and college application practices of non-traditional students is rather limited. Future research could be conducted that specifically investigates the post-secondary application habits of the cyber-charter school student and this population's rate of matriculation and acceptance to post-secondary institutions. Obtaining data from institutions of higher learning would be key to such a study rather than relying on the self-reporting of graduating high school seniors.

Very little data exists about the outcomes of choosing cyber-charter schools. As this population grows and matriculates onto the post-secondary level, the possibility for future research will grow. One possible future study that relates to this current research would be to examine the actual rates of college success of cyber-charter students compared to a traditional high school student. The factors in this future research could include several of the measures of success used in this study, as GPA and retention could provide quantitative data to compare these

two populations. Cooperation with institutions of higher learning would seem to be key to examining data such as this.

Almost every aspect of society and industry changes and evolves over time. It is possible that the current concept of admissions that is held by applicants does not match with the reality of what is actually occurring at the post-secondary level during 21st century admission reviews. The data from this survey indicated that almost as many admission officials made the decision unilaterally as made them as part of a committee, which was a surprise to this researcher and may be surprising to many applicants as well. The data from this survey also revealed that many of the admission officials who are reviewing applications have between one and five years of experience in the field. The effect that having a younger, presumably technologically savvy, and yet possibly less experienced person making admission decisions could be a fertile area for future research. Knowing how application materials are reviewed in a contemporary time period would be of great use to the applicants wishing to maximize their chances for acceptance.

5.5 PERSONAL REFLECTIONS

This study has produced a wealth of valuable information about the state of college admissions in Pennsylvania and the methods that are being utilized to review cyber-charter students for admission. This study contains valuable information for a great variety of stakeholders, especially considering that hundreds of millions of dollars of taxpayer funding is being dispersed to cyber-charter schools each year. However, this researcher is concerned that this study is just the tip of the iceberg. Cyber-charter education is expanding much too rapidly and is far too frequently considered to be a legitimate option for a young person facing difficulty related to his

education. The practice of choosing cyber-charter education has hazardously outpaced the available research on the possible outcomes. Families who are considering the cyber-charter education option for their child should proceed very carefully and review all aspects and research that applies to their child's particular situation.

Conducting this study has been the most rewarding educational experience of this researcher's lifetime. Informing students of the possible outcomes of their choices about the attitudes and perceptions they may face from admission counselors is a responsible part of career and college guidance. As a school counselor for both brick and mortar and online students, the researcher is now able to bring the conclusions of the study to the table during conversations with students and parents as they consider different educational options. As an online high school teacher, the researcher has discovered methods of more effectively applying online teaching practices. When writing online curriculum, he will be more closely examining claims of online-related innovation to determine whether there are true educational benefits. Finally, he will be using the findings as a parent. As an educational consumer who is exploring the best learning opportunities for his own daughter, it is likely that he will be encouraging her to pursue proficiency in learning via a blend of traditional and online formats. However, the findings of this study will not lead him to guide his daughter toward a completely online education via a cyber-charter school.

APPENDIX A

PERMISSION TO ADAPT PREVIOUS SURVEY

On Nov 29, 2012, at 8:30 AM, "Barkovich, David" <BarkovichD@nhsd.net> wrote:
Good morning Dr. Gloeckner. I am currently conducting research for my doctoral dissertation at the University of Pittsburgh and I came across your/Dr. Jones's 2004 research in The Journal of College Admissions regarding "A Study of Admission Officers' Perceptions of and Attitudes Towards Homeschool Students." I was very excited to read your work as I've been independently researching how college admissions officials might perceive cyber-charter schools and cyber-charter school student. I thought I had a rather original topic but I'm now not sure that this may not be the case after reading your research. May I call you sometime to discuss your work and to check to see if you have done any research in the cyber-charter/college admissions area (I am hoping not!) Thank you for any time you might be able to give me.
Dave Barkovich

On Nov 29, 2012, at 1:03 PM, Dr. Gloeckner responded:
From: <Gloeckner>, Gene <Gene.Gloeckner@ColoState.EDU>
Date: Thursday, November 29, 2012 1:03 PM
To: David Barkovich <barkovichd@nhsd.net>
Subject: Re: Research Question

David,
This is a sign of good researcher checking things more deeply. No, I have not done anything else on the topic and I do not think Paul has either although I have not heard from him in a year or so. Our study was using more traditional home schooling and although I am sure some were using the web in various ways we had no information on that variable in our data set. Go forth and analyze more please. The article you are referring to was also of interest to the Mesa society and reprinted in their journal and posted as a feature article by them for a few months. They may also be interested in your work. I didn't think my work would ever be connected with Mesa.
Gene

APPENDIX B

RATIONALE FOR SURVEY ADAPTATIONS

There has been previous related work that also focused on post-secondary institutions in regard to their admission policies and perceptions of a population of non-traditional high school student applicants. Much of this previous associated work (Jenkins, 1998; Jones & Gloeckner, 2004) on college admissions and non-traditional students over the past three decades was based upon Barnebey's (1986) collection of the characteristics of colleges and universities such as geographic location, size, and affiliation as well as their specific requirements for different populations of applicants. With their permission, this particular survey uses Jones and Gloeckner's survey as a template, which itself was based upon a modified format first used by Jenkins (1998), and updated to create an instrument that is specifically designed to examine a non-traditional population of high school students of the 21st century variety (cyber-charter school students). The following table illustrates the adaptations of the previous survey in relation to the previous studies:

Survey Question	Original Question Options from Jones & Gloeckner (2004)	Revised Question Options for this Survey <i>in italics</i>	Literature Review	Rationale
1.1	<i>Question original to this survey</i>	<i>Question original to this survey</i>	NA	Informed consent to participate
1.2	<i>Question original to this survey</i>	<i>Question original to this survey</i>	NA	Questions included to ensure respondent is responsible for admission decisions
1.3	<i>Question original to this survey</i>	<i>Question original to this survey</i>	NA	New source of data for Chi-Squared data analysis
1.4.1	-Private Institution -Church-Affiliated -State-Institution	-Private Institution <i>-Religiously-Affiliated</i> <i>-State or State-related</i>	Barnebey, 1986; Jenkins, 1998	Terms updated to 2013 nomenclature; Original study not conducted in PA, which has state-related institutions
1.4.2	-Baccalaureate/ Associate Colleges -Baccalaureate Colleges-General -Baccalaureate Colleges: Liberal Arts -Master's Colleges I -Master's Colleges II -Doctoral/Research University: Extensive -Doctoral/Research University: Intensive"	<i>-Associate's College</i> <i>-Baccalaureate College</i> <i>-Master's College</i> <i>-Doctoral-granting Institution</i> <i>-Special Focus Institution</i> <i>-Tribal College</i>	Carnegie Foundation, 2010; Barnebey, 1986; Jenkins, 1998	Terms updated to reflect 2010 changes to Basic Carnegie Classifications
1.4.3	Identical scale for reporting campus size	Identical scale for reporting campus size	Barnebey, 1986; Jenkins, 1998	No changes
1.4.4	Rural Urban Suburban	Rural Urban Suburban <i>Online</i>	Barnebey, 1986; Jenkins, 1998	Updated to include online universities, which had not reached prevalence in 2004
1.5	<i>NA-Question original to this survey</i>	<i>NA-Question original to this survey</i>	NACAC, 2011	Current author added an additional institutional characteristic to examine as a function of this study
1.6	"-Less than 10 -10-29 - 30-40"	<i>-Less than 25</i> <i>-25-50</i> <i>-51-100</i> <i>-101-250</i> <i>- 251 or more</i>	Barnebey, 1986; Jenkins, 1998	Additional options added to scales to reflect 2013 possibilities and for increased data collection
2.1-2-4	"Documents Required for Consideration for Admission For Home	Question option now includes: <i>-Different Review</i>	Barnebey, 1986; Jenkins,	Options expanded beyond documentation to include other

	<p>Schooled Graduates:</p> <ul style="list-style-type: none"> -ACT or SAT Scores -Essay -GED -Letters of Recommendation -SAT II (Subject Tests) -Personal Interview -Portfolio” 	<p><i>Staff</i></p> <ul style="list-style-type: none"> -<i>Different Required Documentation</i> -<i>Different Timeline for Review</i> -<i>Other (narrative)</i> 	1998	possibilities for differences in policies/practices. See next question.
3.1	<p>Question posed comparison between overall success of homeschooled students and traditional graduates to be:</p> <ul style="list-style-type: none"> “-Not as well -About the same -Better” 	<p>Question options now state:</p> <ul style="list-style-type: none"> -<i>Much lower</i> -<i>Lower</i> -<i>About the same</i> -<i>Higher</i> -<i>Much higher</i> 	Clason and Dormody, 1994; Jamison 2004; Likert, 1932	Standardization of options more closely resemble Likert scale
3.2	<p>Question posed comparison between GPA of homeschooled students and traditional graduates to be:</p> <ul style="list-style-type: none"> “-Not as well -About the same -Better” 	<p>Question options now state:</p> <ul style="list-style-type: none"> -<i>Much lower</i> -<i>Lower</i> -<i>About the same</i> -<i>Higher</i> -<i>Much higher</i> 	Clason and Dormody, 1994; Jamison 2004; Likert, 1932	Standardization of options more closely resemble Likert scale
3.3	<p>Question asked comparison between freshmen retention of homeschooled students and traditional graduates to be:</p> <ul style="list-style-type: none"> “-Not as well -About the same -Better” 	<p>Question options now state:</p> <ul style="list-style-type: none"> -<i>Much lower</i> -<i>Lower</i> -<i>About the same</i> -<i>Higher</i> -<i>Much higher</i> 	Clason and Dormody, 1994; Jamison 2004; Likert, 1932	Standardization of options more closely resemble Likert scale
3.4	<p>Question asked comparison between social coping of homeschooled students and traditional graduates to be:</p> <ul style="list-style-type: none"> “-Not as well -About the same -Better” 	<p>Question options now state:</p> <ul style="list-style-type: none"> -<i>Much lower</i> -<i>Lower</i> -<i>About the same</i> -<i>Higher</i> -<i>Much higher</i> 	Clason and Dormody, 1994; Jamison 2004; Likert, 1932	Standardization of options more closely resemble Likert scale

APPENDIX C

SURVEY INSTRUMENT AS SEEN BY RESPONDENTS

The following text was distributed via email to the PACAC membership using the BCC option on 1/20/14:

To:

cc:

Bcc: PACAC Email Distribution List

Subject: Educational Research Survey Request

"Attention PACAC Members: A colleague in our organization has asked to conduct a survey of our membership in order to collect data from college admission counselors in regard to a special population of college applicants. PACAC has reviewed the survey and confirms that it is intended for educational research only. You will only be contacted one time regarding this request.

This survey will only take 2-3 minutes to complete. This will be an entirely anonymous survey, although you will be asked several general questions about yourself as well as several very general questions about your institution in order to help categorize your responses. If you would like to choose to participate, then please assist this PACAC member by completing this short survey found here: [LINK TO SURVEY WAS FOUND HERE](#)

The following is the survey instrument as seen by the respondents.

Admission Counselor Survey

Thank you for your willingness to participate!

Your expertise in the field of college admissions will help us examine emerging trends in applications from students attending cyber-charter high schools. This survey should only take only 2-3 minutes to complete. Before we begin the survey, please review the following consent information and check the box below indicating that you agree to take part in this educational research survey.

CONSENT TO PARTICIPATE IN THIS RESEARCH STUDY

Your participation in this study is completely voluntary. You may refuse to take part in it, or you may stop participating at any time, even after beginning the survey.

There is little risk involved in this study. Respondents will complete the survey anonymously. You WILL NOT be asked for any identifying information, including name, contact information, or place of employment. In order for data analysis to occur, you be asked for very basic personal information (Example: Years of experience in the field) and for very basic characteristics of your institutions (Example: Size rounded to the thousandth).

There will be no record pertaining to your involvement in this study. Therefore no indication of your participation will be revealed in any description or publications of this research.

There are no costs to you for participating in this study and you will receive no direct benefit from participating in this study. If the findings are of professional interest to you, a copy of the report is available by emailing the researcher at dab193@pitt.edu.

- I have read the above consent items for this study and any questions I had, including explanation of all terminology, have been answered to my satisfaction. I understand that a copy of this consent form is available by contacting the researcher at the email address provided.
- I understand that I am encouraged to ask questions about any aspect of this research study during the course of this study, and that those questions will be answered by the researcher.
- I understand that my participation in this study is voluntary and that I am free to refuse to participate or to withdraw my consent and discontinue my participation in this study at any time without affecting my future relationship with this researcher or any institution.

* 1. I agree to participate in this survey.

☐ Yes

Admission Counselor Survey

Thank you for consenting to participate.

In the first section, I'd like to ask your involvement with making admission decisions for applicants to your institution.

***2. At your institution of higher learning, do your job responsibilities involve making decisions regarding which students to admit (or not admit) as an individual or as part of a committee?**

- ☐ When making admission decisions, I am most often a member of an admission committee.
- ☐ When making admission decisions, I most often make admission decisions unilaterally.
- ☐ I am not currently a member of an admission committee at a post-secondary institution, but I would like to provide feedback to this survey. (Clicking this option will shift you to the appropriate section of the survey.)

Prev

Next

Powered by **SurveyMonkey**
Check out our [sample surveys](#) and create your own now!

Admission Counselor Survey

Thank you for your continued attention.

I'd now like to ask some very general questions about your own personal professional background and the post-secondary institution at which you are currently employed. All the information will be used for research purposes only and you will not need to identify yourself or your institution.

3. How many years have you been employed in the field of college admissions/enrollment?

- ☐ Less than 1 year
- ☐ 1-4 years
- ☐ 5-10
- ☐ 11-20
- ☐ More than 20

4. Please describe some of the general characteristic of your post-secondary institution.

	Type of Location	General Size	Affiliation	General Selectivity
Your Current Institution	<div></div>	<div></div>	<div></div>	<div></div>

5. Please help to categorize your institution based on the highest type of degree programs that are offered at your post-secondary institution.

- ☐ Associate's Colleges: Includes institutions where all degrees are at the associate's level, or where bachelor's degrees account for less than 10 percent of all undergraduate degrees.
- ☐ Baccalaureate Colleges: Includes institutions where baccalaureate degrees represent at least 10 percent of all undergraduate degrees and where fewer than 50 master's degrees or 20 doctoral degrees were awarded during the update year
- ☐ Master's College and Universities: Generally includes institutions that awarded at least 50 master's degrees and fewer than 20 doctoral degrees during the update year
- ☐ Doctorate-granting Institutions: Includes institutions that awarded at least 20 research doctoral degrees during the update year
- ☐ Special Focus Institution: Institutions awarding baccalaureate or higher-level degrees where a high concentration of degrees (above 75%) is in a single field or set of related fields
- ☐ Tribal College: Colleges and universities that are members of the American Indian Higher Education Consortium, as identified in IPEDS Institutional Characteristics

6. How many admission applications did your institution receive from CYBER-charter school students in the past enrollment year (freshmen entering in fall, 2013)? Under PA law, cyber-charter schools are online self-managed public schools that are approved by local school districts.

- ☐ Fewer than 25
- ☐ 25-50
- ☐ 51-100
- ☐ 100-250
- ☐ 250 or more

Prev

Next

Admission Counselor Survey

Thank you again for providing that information.

Now we'd like to learn more about the admission practices that your institution enacts in regards to cyber-charter school applicants.

7. In this next section, please indicate the type of documentation that you require from traditional school applicants and the documentation required from cyber-charter school applicants. The matrix below allows you to note any differences and explain the differences.

	Standard application	Standard application fee	Official high school transcript	SAT scores	SAT II scores	ACT scores	GED scores	Essay	Interview	Teacher recommendation	Extra-curricular activity information
Traditional high school applicant	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Cyber-charter high school applicant	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Can you please explain the reasons for differences in documentation requirements?

8. It would enhance our research in this field if you could answer the following questions regarding how your admission staff prepares to review cyber-charter school applicants as compared to a traditional high school applicants.

	Yes	No
Is the ADMISSION TIMELINE for reviewing cyber-charter high school applicants EXACTLY THE SAME as for traditional high school applicants?	<input type="radio"/>	<input type="radio"/>
How might they be different?	<div></div>	

Is the ADMISSION COMMITTEE
that reviews cyber-charter school
applicants EXACTLY THE SAME as
for traditional high school applicants?



How might they be different?

Does your institution enact ANY
OTHER DIFFERENT admission
proceedures for cyber-charter school
applicants than for traditional high
school applicants?



How might they be different?

Prev

Next

Admission Counselor Survey

Final Section of Survey

In this last section of the survey, I would like to ask about your expectations for success of cyber-charter school students in comparison to traditional high school graduates.

9. Please rate how you believe that cyber-charter school applicants will perform compared to more traditional high school applicants DURING THEIR FIRST YEAR OF COLLEGE.

	Much Lower	Lower	About the Same	Higher	Much Higher
Overall success in college	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Freshman GPA (Grade Point Average)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Retention at same institution	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Social coping	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Prev

Next

Powered by **SurveyMonkey**
Check out our sample surveys and create your own now!

Admission Counselor Survey

Please click "Done" to conclude the survey. Thank you for your participation.

Your willingness to contribute to this research is very much appreciated! If you have further questions or would like a copy of the findings, you may email dab193@pitt.edu. Thank you again!

Prev

Done

Powered by **SurveyMonkey**
Check out our [sample surveys](#) and create your own now!

APPENDIX D

The raw survey data is listed below according to survey question.

Table 15. Raw Survey Data: Question 1

	n	Percentage
Consent to Participate	207	100%

Table 16. Raw Survey Data: Question 2

Responder Admission Decisions Role	n	Percent
As Committee	74	40.88%
Unilaterally	62	34.25%
Not a member of admission committee	45	24.85%

Table 17. Raw Survey Data: Question 3

Responder Admission Experience	Mean Years of Experience	Approximate Average Years of Experience	n	Percent
Less than 1 year	.5	9.15	6	4.76%
1-4	2		44	34.92%
5-10	7.5		38	30.16%
11-20	15.5		25	19.84%
More than 20	30		13	10.32%

Table 18. Raw Survey Data: Question 4-Setting

Institutional Setting	n	Percent
Rural	33	26.19%
Suburban	65	51.59%
Urban	28	22.22%
Online	0	0%

Table 19. Raw Survey Data: Question 4-Institution Size

Institutional Size	n	Percent
Fewer than 2,000	47	37.30%
2,000 to 4,999	42	33.33%
5,000 to 9,999	21	16.67%
10,000 to 19,999	8	6.35%
20,000 or more	8	6.35%

Table 20. Raw Survey Data: Question 4-Institution Selectivity

Institutional Selectivity	n	Percent
Open Admissions	10	8.06%
Less Selective	27	21.77%
Somewhat Selective	63	50.81%
Very Selective	19	15.32%
Most Selective	5	4.03%

Table 21. Raw Survey Data: Question 5

Carnegie Classifications	n	Percent
Associate's College	6	4.80%
Baccalaureate College	60	48%
Master's Colleges and Universities	22	17.60%
Doctoral/Research University	36	28.80%
Special Focus Institutions	1	.80%
Tribal Colleges	0	0%

Table 22. Raw Survey Data Question 4-Affiliation

Affiliation	n	Percent
Private	65	51.59%
Religiously-affiliated	32	25.40%
State or State-related	29	23.02%

Table 23. Raw Survey Data: Question 6

Number of Cyber Charter Applications Received in 2012-13	n	Percent
Less than 25	55	47.83%
25 - 50	32	27.82%
51 - 100	20	17.39%
101 - 250	5	4.35%
250 or more	3	2.61%

Table 24. Raw Survey Data: Question 7

Question 7	n Same	Percent Same	n Different	Percent Different
Admission documentation exactly the same? <ul style="list-style-type: none"> Standard Application, Standard App Fee, Official Transcript, SAT Scores, SAT II Scores, ACT Scores, Essay, Interview, Teacher Recommendation, Extra-curricular Info 	108	94.74%	6	5.26%
Narrative response: 6 responses to “How might they be different?” <ul style="list-style-type: none"> Explanation of curriculum/syllabus for cyber-charter: 4 responses Require interview for cyber-charter: 2 responses 				Coding CUR: 4 INT: 2

Table 25. Raw Survey Data: Question 8

Question 8	n Same	Percent Same	n Different	Percent Different	Narrative Option
Admission timeline exactly the same?	113	99.12%	1	0.88%	No narrative responses
Admission committee exactly the same?	108	94.74%	6	5.26%	DIR (“Director): 3

Table 26. Raw Survey Data: Question 9–Overall Success Expectations

Overall Success Expectations	n	Percentage
Much lower	2	1.50%
Lower	37	27.82%
About the same	86	64.66%
Higher	8	6.02%
Much higher	0	0%

Table 27. Raw Survey Data: Question 9-GPA Expectations

Grade Point Average Expectations	n	Percentage
Much lower	4	3.01%
Lower	34	25.56%
About the same	80	60.15%
Higher	14	10.53%
Much higher	1	.75%

Table 28. Raw Survey Data: Question 9-Retention Rate Expectations

Retention Rate Expectations	n	Percentage
Much lower	7	5.25%
Lower	41	30.83%
About the same	76	57.14%
Higher	8	6.02%
Much higher	1	.75%

Table 29. Raw Survey Data: Question 9-Social Coping Expectations

Social Coping Expectations	n	Percentage
Much lower	13	9.77%
Lower	67	50.38%
About the same	53	39.85%
Higher	0	0%
Much higher	0	0%

APPENDIX E

The following pages detail the two-way tables that organized the data analysis designed to answer the third research question.

Table 30. Data Comparison-Question 4-6 and Question 9: Overall Expectation for Success

	Overall: Much Lower	Overall: Lower	Overall: About Same	Overall: Higher	Overall: Much Higher
Location: Rural	0 0%	6 22.22%	20 74.07%	1 3.70%	0 0%
Location: Suburban	0 0%	9 18%	40 80%	1 2%	0 0%
Location: Urban	1 4.55%	5 22.73%	15 68.18%	1 4.55%	0 0%
Location: Online	0 0%	0 0%	0 0%	0 0%	0 0%
Size: <1,999	0 0%	8 22%	28 76%	1 2%	0 0%
Size: 2000-4,999	1 2%	8 21%	28 74%	1 2%	0 0%
Size: 5,000-9,999	0 0%	2 12%	13 81%	1 6%	0 0%
Size: 10,000-19,999	0 0%	1 20%	4 80%	0 0%	0 0%
Size: > 20,000	0 0%	1 25%	3 75%	0 0%	0 0%
Affiliation: Private	0 0%	11 22%	39 78%	0 0%	0 0%
Affiliation: Religious	1 4%	4 16%	17 68%	3 12%	0 0%
Affiliation: State/ Related	0 0%	5 18%	23 82%	0 0%	0 0%
Selectivity: Open	0 0%	0 0%	9 100%	0 0%	0 0%
Selectivity: Less	1 5%	4 19%	16 76%	0 0%	0 0%
Selectivity: Somewhat	0 0%	13 22%	33 67%	3 6%	0 0%
Selectivity: Very	0 0%	2 12%	14 88%	0 0%	0 0%
Selectivity: Most	0 0%	1 25%	3 75%	0 0%	0 0%
Degree: Associate	0 0%	1 25%	3 75%	0 0%	0 0%
Degree: Bachelor	0 0%	9 17.65%	42 82.35%	0 0%	0 0%
Degree: Masters	0 0%	4 23.53%	11 64.71%	2 11.76%	0 0%
Degree: Doctorate	1 3.70%	6 22.22%	19 66.67%	1 3.70%	0 0%
Degree: Special Focus	0 0%	0 0%	0 0%	0 0%	0 0%
Degree: Tribal	0 0%	0 0%	0 0%	0 0%	0 0%

Table 31. Data Comparison: Questions 4-6 and Question 9: GPA Expectations

	GPA: Much Lower	GPA: Lower	GPA: About Same	GPA: Higher	GPA: Much Higher
Location: Rural	0 0%	7 25.93%	16 59.26%	3 11.11%	1 3.70%
Location: Suburban	2 4%	8 16%	36 72%	4 8%	0 0%
Location: Urban	1 4.55%	4 18.18%	17 77.27%	0 0%	0 0%
Location: Online	0 0%	0 0%	0 0%	0 0%	0 0%
Size: <1,999	2 6%	5 13%	25 68%	5 13%	0 0%
Size: 2000-4,999	1 3%	10 26%	26 68%	1 3%	0 0%
Size: 5,000-9,999	0 6%	2 12%	14 82%	1 6%	0 0%
Size: 10,000-19,999	0 0%	1 20%	4 80%	0 0%	0 0%
Size: > 20,000	0 0%	1 25%	3 75%	0 0%	0 0%
Affiliation: Private	2 5%	11 27%	28 68%	0 0%	0 0%
Affiliation: Religious	1 4%	3 11%	18 67%	5 19%	0 0%
Affiliation: State/ Related	0 0%	5 28%	15 68%	2 9%	0 0%
Selectivity: Open	0 0%	2 22%	6 66%	1 11%	0 0%
Selectivity: Less	1 5%	2 9%	16 76%	1 5%	1 5%
Selectivity: Somewhat	0 0%	11 22%	34 69%	4 8%	0 0%
Selectivity: Very	1 6%	4 23%	12 66%	1 6%	0 0%
Selectivity: Most	1 25%	0 0%	3 75%	0 0%	0 0%
Degree: Associate	0 0%	1 25%	3 75%	0 0%	0 0%
Degree: Bachelor	2 3.92%	9 17.65%	36 70.59%	3 5.88%	1 1.96%
Degree: Masters	0 0%	3 17.65%	10 58.82%	4 23.53%	0 0%
Degree: Doctorate	0 0%	16 59.26%	11 40.74%	0 0%	0 0%
Degree: Special Focus	0 0%	0 0%	0 0%	0 0%	0 0%
Degree: Tribal	0 0%	0 0%	0 0%	0 0%	0 0%

Table 32. Data Comparison: Questions 4-6 and Question 9: Retention

	Retention Much Lower	Retention Lower	Retention About Same	Retention Higher	Retention Much Higher
Location: Rural	1 3.70%	6 22.22%	17 62.96%	2 7.41%	1 3.70%
Location: Suburban	0 0%	13 26%	35 70%	2 4%	0 0%
Location: Urban	1 4.55%	9 40.91%	12 54.55%	0 0%	0 0%
Location: Online	0 0%	0 0%	0 0%	0 0%	0 0%
Size: <1,999	2 4%	10 21%	33 70%	2 4%	0 0%
Size: 2000-4,999	1 3%	12 31%	23 60%	2 6%	0 0%
Size: 5,000-9,999	0 0%	4 25%	12 75%	0 0%	0 0%
Size: 10,000-19,999	0 0%	3 60%	2 40%	0 0%	0 0%
Size: > 20,000	0 0%	0 0%	4	0 0%	0 0%
Affiliation: Private	0 0%	15 30%	33 66%	1 2%	1 2%
Affiliation: Religious	2 7%	5 19%	17 63%	3 11%	0 0%
Affiliation: State/ Related	0 0%	19 58%	14 42%	0 0%	0 0%
Selectivity: Open	0 0%	4 44%	5 55%	0 0%	0 0%
Selectivity: Less	1 5%	4 20%	15 75%	0 0%	0 0%
Selectivity: Somewhat	1 2%	18 35%	28 55%	3 4%	1 2%
Selectivity: Very	0 0%	3 19%	13 71%	0 0%	0 0%
Selectivity: Most	0 0%	0 0%	4 100%	0 0%	0 0%
Degree: Associate	0 0%	1 25%	3 75%	0 0%	0 0%
Degree: Bachelor	0 0%	14 27.45%	34 66.67%	2 3.92%	1 1.96%
Degree: Masters	1 5.88%	5 29.41%	9 52.94%	2 11.76%	0 0%
Degree: Doctorate	1 3.70%	8 29.63%	18 66.67%	0 0%	0 0%
Degree: Special Focus	0 0%	0 0%	0 0%	0 0%	0 0%
Degree: Tribal	0 0%	0 0%	0 0%	0 0%	0 0%

Table 33. Data Comparison: Question 4-6 and Question 9-Social Coping

	Social Coping: Much Lower	Social Coping: Lower	Social Coping: About Same	Social Coping: Higher	Social Coping: Much Higher
Location: Rural	2 7%	15 55%	10 37%	0 0%	0 0%
Location: Suburban	2 4%	26 52%	22 44%	0 0%	0 0%
Location: Urban	1 4.55%	10 45.45%	11 50%	0 0%	0 0%
Location: Online	0 0%	0 0%	0 0%	0 0%	0 0%
Size: <1,999	1 3%	19 53%	15 43%	0 0%	0 0%
Size: 2000-4,999	1 3%	17 45%	19 50%	0 0%	0 0%
Size: 5,000-9,999	0 0%	10 63%	6 37%	0 0%	0 0%
Size: 10,000-19,999	0 0%	4 80%	1 20%	0 0%	0 0%
Size: > 20,000	0 0%	2 50%	2 50%	0 0%	0 0%
Affiliation: Private	3 6%	28 56%	19 38%	0 0%	0 0%
Affiliation: Religious	2 5%	10 37%	15 55%	0 0%	0 0%
Affiliation: State/ Related	0 0%	14 61%	9 39%	0 0%	0 0%
Selectivity: Open	0 0%	7 77%	2 23%	0 0%	0 0%
Selectivity: Less	1 5%	4 19%	16 76%	0 0%	0 0%
Selectivity: Somewhat	5 10%	20 41%	24 49%	0 0%	0 0%
Selectivity: Very	0 0%	12 75%	4 25%	0 0%	0 0%
Selectivity: Most	0 0%	4 100%	0 0%	0 0%	0 0%
Degree: Associate	0 0%	2 50%	2 50%	0 0%	0 0%
Degree: Bachelor	3 5.88%	28 54.90%	20 39.22%	0 0%	0 0%
Degree: Masters	2 11.76%	5 29.41%	10 58.82%	0 0%	0 0%
Degree: Doctorate	0 0%	16 59.26%	11 40.74%	0 0%	0 0%
Degree: Special Focus	0 0%	0 0%	0 0%	0 0%	0 0%
Degree: Tribal	0 0%	0 0%	0 0%	0 0%	0 0%

APPENDIX F

The following tables detail the Chi-Squared tests conducted regarding the attitudes and perceptions of the admission counselors (as indicated on Likert-type rating scales) and the characteristics of the respondent's institutions.

Table 34. Observed vs. Expected Counts Between Institution Location and Expectation for Overall Success of Cyber-Charter Applicants

	Overall Success: Much Lower and Lower	Overall Success: About Same	Overall: Higher and Much Higher	Total
Location: Rural	6/5.73	20/20.45	1/0.82	27
Location: Suburban	9/10.61	40/37.88	1/1.52	50
Location: Urban	6/4.67	15/16.67	1/.067	22
	21	75	3	99

From this analysis, the Chi-Square test statistic is 1.31, which yields a p-value of .859. This indicates that no evidence exists of a significant relationship between the location of a post-secondary institution and the admission counselor's expectations for overall success of cyber-charter applicants once they are enrolled at that institution.

Table 35. Observed vs. Expected Counts Between Institution Location and Expectations for GPA of Cyber-Charter Applicants

	GPA: Much Lower and Lower	GPA: About Same	GPA: Higher and Much Higher	Total

Location: Rural	7/6.00	16/18.82	4/2.18	27
Location: Suburban	10/11.11	36/36.85	4/4.04	50
Location: Urban	5/4.89	17/15.33	0/1.78	22
	22	69	8	99

From this analysis, the Chi-Square test statistic is 4.215, which yields a p-value of .378. This shows that there is no evidence of a significant relationship between the location of a post-secondary institution and the admission counselor's expectations for the freshmen GPA of cyber-charter applicants once they are enrolled at that institution.

Table 36. Observed vs. Expected Counts Between Institution Location and Freshmen Retention Expectations of Cyber-Charter Applicants

	Retention: Much Lower and Lower	Retention: About Same	Retention: Higher and Much Higher	Total
Location: Rural	7/8.18	17/17.45	3/1.36	27
Location: Suburban	13/15.15	35/32.32	2/2.53	50
Location: Urban	10/6.67	12/14.22	0/1.11	22
	30	64	5	99

From this analysis, the Chi-Square test statistic is 5.908, which yields a p-value of .206. This shows that there is no evidence of a relationship between the location of a post-secondary institution and the admission counselor's expectations for the freshmen retention of cyber-charter applicants once they are enrolled at that institution.

Table 37. Observed vs. Expected Counts Between Institution Location and Expectations for Social Coping of Cyber-Charter Students

	Social Coping: Much Lower and Lower	Social Coping: About Same	Social Coping: Higher and Much Higher	Total
Location: Rural	17/15.27	10/11.73	0	27
Location: Suburban	28/28.28	22/21.72	0	50
Location: Urban	11/12.44	11/9.56	0	22
	56	43	0	99

From this analysis, the Chi-Square test statistic is .842, which yields a p-value of .656. This shows that there is no evidence of a significant relationship between the location of a post-secondary institution and the admission counselor's expectations for the social coping of cyber-charter applicants once they are enrolled at that institution. It is important to note that the null response rate for the Higher and Much Higher categories required their exemption for the Chi-Square analysis.

The next part of the data analysis was conducted in a similar manner. However, the collected data results were condensed in the next several tables to three categories instead of five as the results in many of the categories had fewer than five responses.

Table 38. Observed vs. Expected Counts Between Institution Size and Expectations for Overall Success of Cyber-Charter Applicants

	Overall: Much Lower and Lower	Overall: About Same	Overall: Higher and Much Higher	Total
Size: Less than 1,999	8/8.63	28/27.13	1/1.23	37
Size: 2,000-9,999	11/10.27	31/32.27	2/1.47	44
Size: Greater than 10,000	2/2.10	7/6.60	0/0.30	9
	21	66	3	100

From this analysis, the Chi-Square test statistic is .743, which yields a p-value of .946. This shows that there is no evidence of a significant relationship between the size of a post-secondary institution and the admission counselor's expectations for the overall success of cyber-charter applicants once they are enrolled at that institution.

Table 39. Observed vs. Expected Counts Between Institution Size and GPA Expectations for Cyber-Charter Applicants

	GPA: Much Lower and Lower	GPA: About Same	GPA: Higher and Much Higher	Total

Size: Less than 1,999	7/7.98	25/26.48	5/2.54	37
Size: 2,000-9,999	13/11.86	40/39.36	2/3.77	55
Size: Greater than 10,000	2/2.16	8/7.16	0/.69	10
	22	73	7	102

From this analysis, the Chi-Square test statistic is 4.339, which yields a p-value of .362. This shows that there is no evidence of a significance relationship between the size of a post-secondary institution and the admission counselor's expectations for the freshmen GPA of cyber-charter applicants once they are enrolled at that institution.

Table 40. Observed vs. Expected Counts Between Institution Size and Retention Expectations for Cyber-Charter Applicants

	Retention: Much Lower and Lower	Retention: About Same	Retention: Higher and Much Higher	Total
Size: Less than 1,999	12/13.67	33/31.62	2/1.71	47
Size: 2,000-9,999	17/15.71	35/36.33	2/1.96	54
Size: Greater than 10,000	3/2.62	6/6.05	0.033	9
	32	74	4	110

From this analysis, the Chi-Square test statistic is .853, which yields a p-value of .931. This shows that there is no evidence of a significant relationship between the size of a post-secondary institution and the admission counselor's expectations for the freshmen retention of cyber-charter applicants once they are enrolled at that institution.

Table 41. Observed vs. Expected Counts Between Institution Size and Social Coping Expectations for Cyber-Charter Applicants

	Social Coping: Much Lower and Lower	Social Coping: About Same	Social Coping: Higher and Much Higher	Total
Size: Less than 1,999	20/19.48	15/15.52	0	35
Size: 2,000-9,999	28/29.51	25/23.49	0	53
Size: Greater than 10,000	6/5.01	3/3.99	0	9
	54	43	0	97

From this analysis, the Chi-Square test statistic is .645, which yields a p-value of .724. This shows that there is no evidence of a significant relationship between the size of a post-secondary institution and the admission counselor's expectations for the social coping of cyber-charter applicants once they are enrolled at that institution.

Table 42. Observed vs. Expected Counts Between Institution Affiliation and Expectations for Overall Success of Cyber-Charter Applicants

	Overall: Much Lower and Lower	Overall: About Same	Overall: Higher and Much Higher	Total
Affiliation: Private	11/12.07	39/36.21	0/1.72	50
Affiliation: Religious	5/2.17	1/6.62	3/0.31	9
Affiliation: State or State-related	5/6.76	23/20.28	0/0.97	28
	21	63	3	87

From this analysis, the Chi-Square test statistic is 1.31, which yields a p-value of .860. This shows that there is no evidence of a significant relationship between the affiliation of a post-secondary institution and the admission counselor's expectations for the overall success of cyber-charter applicants once they are enrolled at that institution.

Table 43. Observed vs. Expected Counts Between Institution Affiliation and GPA Expectations for Cyber-Charter Applicants

	GPA: Much Lower and Lower	GPA: About Same	GPA: Higher and Much Higher	Total
Affiliation: Private	13/10.13	28/28.10	0/2.76	41
Affiliation: Religious	4/6.43	18/17.82	5/1.75	26
Affiliation: State or State-related	5/5.44	15/15.08	2/1.48	22
	22	61	6	89

From this analysis, the Chi-Square test statistic is 7.590, which yields a p-value of .108.

This shows that there is no significant evidence of a relationship between the affiliation of a post-secondary institution and the admission counselor's expectations for the freshmen GPA of cyber-charter applicants once they are enrolled at that institution.

Table 44. Observed vs. Expected Counts Between Institution Affiliation and Retention Expectations for Cyber-Charter Applicants

	Retention: Much Lower and Lower	Retention: About Same	Retention: Higher and Much Higher	Total
Affiliation: Private	15/18.43	33/28.77	1/1.80	49
Affiliation: Religious	7/10.16	17/15.85	3/.99	27
Affiliation: State or State-related	19/12.41	14/19.38	0/1.21	33
	41	64	4	109

From this analysis, the Chi-Square test statistic is 12.951, which yields a p-value of .012. This shows that there is moderate evidence of a relationship between the affiliation of a post-secondary institution and the admission counselor's expectations for the freshmen retention of cyber-charter applicants once they are enrolled at that institution. However, this provides evidence of significance only and not of a relationship between the variables.

Table 45. Observed vs. Expected Counts Between Institution Affiliation and Social Coping Expectations for Cyber-Charter Applicants

	Social Coping: Much Lower and Lower	Social Coping: About Same	Social Coping: Higher and Much Higher	Total
Affiliation: Private	31/28.50	19/21.50	0	50
Affiliation: Religious	12/15.39	15/11.61	0	27
Affiliation: State or State-related	14/13.11	9/9.89	0	23
	57	43	0	100

From this analysis, the Chi-Square test statistic is 2.387, which yields a p-value of .303.

This shows that there is no evidence of a significant relationship between the affiliation of a post-secondary institution and the admission counselor's expectations for the social coping of cyber-charter applicants once they are enrolled at that institution. It is important to note that the null response rate for the Higher and Much Higher categories required their exemption for the Chi-Square analysis.

The collected data results from the next category (selectivity) were condensed to three categories instead of five when the results had less than 5 responses in a category.

Table 46. Observed vs. Expected Counts Between Institution Selectivity and Expectations for Overall Success of Cyber-Charter Applicants

	Overall: Much Lower and Lower	Overall: About Same	Overall: Higher and Much Higher	Total
Selectivity: Open or Less	5/6.36	25/22.73	0/.91	30
Selectivity: Somewhat	13/10.39	33/37.12	3/1.48	49
Selectivity: Very or Most	3/4.24	17/15.15	0/.61	20
	21	75	3	99

From this analysis, the Chi-Square test statistic is 5.281, which yields a p-value of .260. This shows that there is no evidence of a significance relationship between the selectivity of a post-secondary institution and the admission counselor's expectations for the overall success of cyber-charter applicants once they are enrolled at that institution.

Table 47. Observed vs. Expected Counts Between Institution Selectivity and GPA Expectations for Cyber-Charter Applicants

	GPA: Much Lower and Lower	GPA: About Same	GPA: Higher and Much Higher	Total
Selectivity: Open or Less	5/6.53	22/20.09	3/2.38	30
Selectivity: Somewhat	11/20.67	34/34.45	4/3.88	49
Selectivity: Very or Most	6/4.79	15/15.47	1/1.74	22
	22	71	8	101

From this analysis, the Chi-Square test statistic is 1.218, which yields a p-value of .875. This shows that there is no evidence of a significant relationship between the selectivity of a post-secondary institution and the admission counselor's expectations for the freshmen GPA of cyber-charter applicants once they are enrolled at that institution.

Table 48. Observed vs. Expected Counts Between Institution Selectivity and Retention Expectations for Cyber-Charter Applicant

	Retention: Much Lower and Lower	Retention: About Same	Retention: Higher and Much Higher	Total
Selectivity: Open or Less	9/8.99	20/18.85	0/1.16	29
Selectivity: Somewhat	19/15.81	28/33/15	4/2.04	51
Selectivity: Very or Most	3/6.20	17/13.00	0/80	20
	31	65	4	100

From this analysis, the Chi-Square test statistic is 8.239, which yields a p-value of .0832. This shows that there is very strong evidence of a significant relationship between the selectivity of a post-secondary institution and the admission counselor's expectations for the freshmen retention of cyber-charter applicants once they are enrolled at that institution. While the overall findings show significance, there fails be a difference between the different levels of selectivity indicating no association between the variables.

Table 49. Observed vs. Expected Counts Between Institution Selectivity and Social Coping Expectations for Cyber-Charter Applicants

	Social Coping: Much Lower and Lower	Social Coping: About Same	Social Coping: Higher and Much Higher	Total
Selectivity: Open or Less	12/16.79	18/15.21	0	32
Selectivity: Somewhat	25/25.72	24/23.20	0	49
Selectivity: Very or Most	16/10.50	4/9.50	0	20
	53	48	0	101

From this analysis, the Chi-Square test statistic is 8.995, which yields a p-value of .011. This shows that there is strong evidence of a relationship between the selectivity of a post-secondary institution and the admission counselor's expectations for the social coping of cyber-charter applicants once they are enrolled at that institution. It is important to note that the null response rate for the Higher and Much Higher categories required their exemption for the Chi-Square analysis. While the overall findings show significance, there fails to be a difference between the different levels of selectivity indicating no association between the variables.

The collected data results from the next category (degree programs offered at each institution) were condensed to two categories instead of five as many of the result fields had less than 5 responses in a category. As there were not responses to the "Special Focus" and "Tribal College" fields, these domains were left out of the data analysis.

Table 50. Observed vs. Expected Counts Between Degree Programs Offered by Institutions and Expectations for Overall Success of Cyber-Charter Applicants

	Overall: Much Lower and Lower	Overall: About Same	Overall: Higher and Much Higher	Total
Degree: < Baccalaureate	1/.85	3/3.03	0/.12	4
Degree: ≥ Baccalaureate	20/20.15	72/71.97	3/2.88	95
	21	75	3	99

From this analysis, the Chi-Square test statistic is 0.155, which yields a p-value of .925. This shows that there is no evidence of a relationship between the degree programs offered by a post-secondary institution and the admission counselor's expectations for the overall success of cyber-charter applicants once they are enrolled at that institution.

**Table 51. Observed vs. Expected Counts Between Degree Programs Offered By an Institution and
GPA Expectations for Cyber-Charter Applicants**

	GPA: Much Lower and Lower	GPA: About Same	GPA: Higher and Much Higher	Total
Degree: < Baccalaureate	1/1.25	3/2.42	0/0.32	4
Degree: ≥ Baccalaureate	30/29.75	57/57.58	8/7.68	95
	31	60	8	99

From this analysis, the Chi-Square test statistic is .532, which yields a p-value of .7664. This shows that there is no evidence of a significant relationship between the degree programs offered at a post-secondary institution and the admission counselor's expectations for the freshmen GPA of cyber-charter applicants once they are enrolled at that institution.

**Table 52. Observed vs. Expected Counts Between Degree Programs Offered at Institution and
Retention Expectations for Cyber-Charter Applicants**

	Retention: Much Lower and Lower	Retention: About Same	Retention: Higher and Much Higher	Total
Degree: < Baccalaureate	1/1.21	3/2.59	0/0.20	4
Degree: ≥ Baccalaureate	29/28.79	61/61.41	5/4.80	95
	30	64	5	99

From this analysis, the Chi-Square test statistic is .318, which yields a p-value of .853. This shows that there is no evidence of a significant relationship between the degree programs offered at a post-secondary institution and the admission counselor's expectations for the freshmen retention of cyber-charter applicants once they are enrolled at that institution.

**Table 53. Observed vs. Expected Counts Between Degree Programs Offered at an Institution and
Social Coping Expectations for Cyber-Charter Applicants**

	Social Coping: Much Lower and Lower	Social Coping: About Same	Social Coping: Higher and Much Higher	Total
Degree: < Baccalaureate	2/2.84	2/1.16	0	4
Degree: ≥ Baccalaureate	54/53.16	21/21/84	0	74
	56	23	0	79

From this analysis, the Chi-Square test statistic is .891, which yields a *p-value* of .641. This shows that there is no evidence of a significant relationship between the degree programs of a post-secondary institution and the admission counselor's expectations for the social coping of cyber-charter applicants once they are enrolled at that institution. It is important to note that the null response rate for the Higher and Much Higher categories required their exemption from the Chi-Square analysis.

BIBLIOGRAPHY

- Allen, I. E., & Seaman, J. (2010). *Learning on demand: Online education in the United States, 2009*. Newburyport, MA: The Sloan Consortium.
- Allen, I. E., & Seaman, J. (2013). *Changing course: ten years of tracking online education in the United States*. Wellesley, MA: Babson College.
- Alreck, P.L., & Settle, R.B. (1995). *The survey research handbook (2nd ed.)*. Chicago: Irwin.
- American Association of Collegiate Registrars and Admissions Officers. (1999). *College admissions and the home schooling challenge*. AACRAC: Washington, DC.
- Anderson, G., Benjamin, D., & Fuss, M.A. (1994). The determinants of success in university introductory economics courses. *Journal of Economic Education*, 25, 99–119.
- Arsen, D., Plank, D., & Sykes, G. (1999). *School choice policies in Michigan: The rules matter*. East Lansing, Michigan: Michigan State University.
- Ascher, C., Echazarreta, J., Jacobowitz, R., McBride, Y., & Troy, T. (2003). *Governance and administrative infrastructure in New York City charter schools: Going charter year three findings*. New York, NY: New York Institute for Education and Social Policy.
- Babbie, E. (2001). *The practice of social research (9th ed.)*. Belmont, CA: Wadsworth.
- Barnebey, L. F. (1986). *American university admission requirements for home schooled applicants in 1984*. Unpublished Doctoral Dissertation, Brigham Young University, Provo, Utah.

- Barnes, N., & Mattson, E. (2007). *The Game has changed: College admissions outpace corporations in adoption of social media* (White paper). Retrieved 11/5/12 from www.umassd.edu/cmr/studiesresearch/blogstudy3.cfm
- Barbour, M. K., Hasler-Waters, L., & Hunt, J. (2011). *Online and blended learning: Case studies from K-12 schools around the world*. Vienna, VA: International Association for K-12 Online Learning.
- Berge, Z. L., & Clark, T. (2005). *Virtual schools: Planning for success*. New York, NY: Teachers College Press.
- Bifulco, R., & Ladd, H. (2006). Institutional change and coproduction of public services: The effect of charter schools on parental involvement. *Journal of Public Administration Research and Theory*, 16(4), 553- 576.
- Buddin, R., & Zimmer, R. (2005). A Closer Look at Charter School Student Achievement. *Journal of Policy Analysis and Management*, 24(2), 351-372.
- Bulkley, K., & Fisler, J. (2002). *A decade of charter schools: From theory to practice*. Philadelphia, PA: Consortium for Policy Research in Education, University of Pennsylvania.
- Breland, H., Maxey, J., Gernand, R., Cumming, T., & Trapani, C. (2002). *Trends in college admission 2000: A report of a national survey of undergraduate admission policies, practices, and procedures*. Retrieved April 13, 2012 from <http://airweb.org/trends.html>.
- Bryk, A.S., & Schneider, B. (2002). *Trust in schools: A core resource for improvement*. New York, NY: Russell Sage Foundation.
- Carlson, D., & Lavery, L., & Witte, J. (2012). Charter school authorizers and student achievement. *Economics of Education Review*, 31, 254-267.

- Carr-Chellman, A.A., & Marsh, R.M. (2009). Pennsylvania cyber school funding: Follow the Money. *TechTrends: Linking Research and Practice to Improve Learning*, 53(4), 49-55.
- Carruthers, C. (2012). New schools, new students, new teachers: Evaluating the effectiveness of charter schools. *Economics of Education Review*, 31, 280-292.
- Cavanaugh, C., & Clark, T. (2007). *What works in K-12 online learning*. Eugene, OR: International Society for Technology in Education.
- Center for Research on Education Outcomes (CREDO). (2009, June). *Multiple choice: Charter school performance in 16 states*. Stanford, CA: Author. Retrieved on 11/15/12 from http://credo.stanford.edu/reports/MULTIPLE_CHOICE_CREDO.pdf
- Center for Education Reform. (2002). *Groundbreaking report shows competition from school choice sparks widespread public school reform*. Washington, DC: Center for Education Reform.
- Center for Education Reform. (2011). *2011-12 Charter school enrollment statistics*. Washington, DC: Center for Education Reform.
- Center for Research on Education Outcomes (2012). *National charter school summary*. Stanford, CA: CREDO.
- Center for Research on Education Outcomes (2013). *National charter school study*. Stanford, CA: CREDO.
- Clark, B. (1997). *Growing up gifted: Developing the potential of children at home and at school* (5th ed.). Upper Saddle River, NJ: Prentice Hall.
- Clark, T. (2000). *Virtual high schools: State of the states*. Macomb, IL: Center for the Application of Information Technologies, Western Illinois University.
- Clason, D. L., & Dormody, T. J. (1994) Analyzing data measured by individual Likert-type

- items. *Journal of Agricultural Education*, 35(4), 31- 35.
- Chubb, J., & Moe, T.M. (1990) *Politics, Markets, and America's Schools*. Washington, D.C.: Brookings Institution.
- Cavanaugh, C., Barbour, M. K., & Clark, T. (2009). Research and practice in K-12 online learning: A review of literature. *International Review of Research in Open and Distance Learning*, 10, 1-5.
- Cavanaugh, C., Gillian, K. J., Kromrey, J., Hess, M., & Blomeyer, R. (2004). *The effects of distance education on k-12 student outcomes: A meta-analysis*. Naperville, IL: North Central Regional Educational Laboratory.
- Cheung, L. L. W., & Kan, A. C. N. (2002). Evaluation of factors related to student performance in a distance-learning business communication course. *Journal of Education for Business*, 77(5), 257-263.
- Cogan, M. (2010). *Exploring academic outcomes of homeschooled students*. Journal of College Admission, Summer, 2012, 1-7.
- College Board. (2013). *Finding your college fit*. Retrieved 11/6/13 from <https://bigfuture.collegeboard.org/find-colleges/how-find-your-college-fit>
- College Board. (2014). *Finding your college fit*. Retrieved 2/15/14 from <https://bigfuture.collegeboard.org/find-colleges/how-find-your-college-fit>
- Cookson, P. W. (1992). *The choice controversy*. Newbury Park, California: Corwin Press, Inc.
- Cookson, P., & Persell, C. H. (1985). *Preparing for power: America's elite boarding schools*. New York: Basic Books.
- Davis, N. E., & Roblyer, M. D. (2005). Preparing teachers for the schools that technology built: Evaluation of a program to train teachers for virtual schooling. *Journal of Research on*

- Technology in Education*, 37(4), 399-409.
- DiPietro, M., Ferdig, R. E., Black, E. W., & Preston, M. (2008). Best practices in teaching K-12 online: Lessons learned from Michigan Virtual School teachers. *Journal of Interactive Online Learning*, 7(1). Retrieved on May 30, 2013, from <http://www.ncolr.org/jiol/issues/getfile.cfm?volID=7&IssueID=22&ArticleID=113>
- Earle, R. S. (1998). *Instructional design and teacher planning: Reflections and perspectives*. In R. M. Branch & M. A. Fitzgerald (Eds.), *Educational Media and Technology Yearbook* (Volume 23, pp. 29–41). Englewood, CO: Libraries Unlimited.
- Education Week. Choice (Electronic version). *Educational Week*. (2004, August 3). Retrieved September 10, 2012, from <http://www.edweek.org/rc/issues/choice/>
- Epstein, J. (2009). Behind the SAT-optional movement: Context and controversy. *Journal of College Admission*, (204), 8-19.
- Erickson, A. (2011). The Rhetoric of Choice: Segregation, Desegregation, and Charter Schools. *Dissent Magazine*, Fall 2011, 41-46.
- Estrada, William A. (2013). *New changes to military enlistment for homeschool graduates*. Retrieved October 30, 2013 from <http://www.hslda.org/docs/news/2013/201304260.asp>
- Farmer-Hinton, R. L., & McCullough, R. G. (2008). College Counseling in Charter High Schools: Examining the Opportunities and Challenges. *The High School Journal*. NC: The University of North Carolina Press.
- Ferdig, R. E., DiPietro, M., & Papanastasiou, E. (2005). *Teaching and learning in collaborative virtual high schools*. Naperville, Illinois: Learning Point Associates.
- Finn, C. E., Manno, B. V., & Vanourek, G. (2000). *Charter schools in action: Renewing public education*. Princeton, NJ: Princeton University Press.

- Fuller, B. (2000). *Inside charter schools: The paradox of radical decentralization*. Cambridge, MA: Harvard University Press.
- Frost, E. A., Jr. (1987). A descriptive study of the academic achievement of selected elementary school-aged children educated at home in five Illinois counties. (Doctoral Dissertation, Northern Illinois University, 1987.) *Dissertation Abstracts International*, 48(7) 1589A.
- Galloway, R. A. S. (1995). *Home schooled adults: Are they ready for college?*. Paper presented at the Annual Meeting of the American Educational Research Association. San Francisco, CA.
- Gewertz, C. (2008 September 8). Many charter boards seen as unprepared. *Education Week*. Retrieved Sept. 9, 2008 from <http://www.edweek.org/ew/articles/2008/09/10wallace-6.h28.html>
- Gray, Nathan L. (2012). School Choice and Achievement: The Ohio charter school experience. *Cato Journal*. 32, 3.
- Greene, J. P. (2000). *The Effects of School Choice: An evaluation of the Charlotte children's scholarship fund program*. Civic Report No. 12 . Paper for the Center for Civic Innovation, Manhattan Institute, New York.
- Greiner, L. E. (1972). Evolution & revolution as organizations grow. *Harvard Business Review*, July-Aug, 37-46.
- Griffin, N.C., & Wohlstetter, P. (2001). Building the plane while flying it: Early lessons from developing charter schools. *Teachers College Record*, 103(2), 336-65.
- Gronberg, T.J., Jansen, D.W., & Taylor, L.L. (2012). The relative efficiency of charter schools: A cost frontier approach. *Economics of Education Research*, 31(2012), 302-317.
- González, K. P., Stoner, C., & Jovel, J. E. (2003). Examining the role of social capital in access

- to college for Latinas: Toward a college opportunity framework. *Journal of Hispanic Higher Education*, 2(1), 146-170.
- Henig, J. R. (1996) *The Local Dynamics of Choice: Ethnic Preferences and Institutional Responses*. In B. Fuller and R.F. Elmore (Eds.) *Who Chooses? Who Loses? Culture, Institutions, and the Unequal Effects of School Choice*. New York: Teacher College Press.
- Higher Education Act (1965). Pub. L. No. 89-329.
- Hill, P. T., Lake, R. J., Celio, M. B. (2002). *Charter schools and accountability in public education*. Washington, DC: Brookings Institution Press.
- Hill, P., Lake, R., Celio, M. B., Campell, C., Herdman, P., & Bulkley, K. (2001). *A study of charter school accountability*. Seattle, WA: Center on Reinventing Public Education, University of Washington.
- Home School Legal Defense Association. 2006. *Federal requirements for homeschoolers seeking college admission and financial aid*. Retrieved September 1, 2012 from <http://www.hslda.org/docs/news/hslda/200306/200306190.asp>
- Horn, J., & Miron, G. (2000). *An evaluation of the Michigan charter school initiative: Performance, accountability and impact*. Kalamazoo, MI: The Evaluation Center, Western Michigan University.
- House, J. D. and Keeley, E. J. (1997). Predictive validity of college admissions test scores for American Indian students. *Journal of Psychology*, 131, 572–575.
- Huerta, L., González, M., d'Entremont, C. (2006). Cyber and Home School Charter Schools: Adapting Policy to New Forms of Public Schooling. *Peabody Journal of Education*, 81, 103-39.

- Hughes, J. E., McLeod, S., Brown, R., Maeda, Y., & Choi, J. (2005). *Staff development and student perceptions of the learning environment in virtual and traditional secondary schools*. Naperville, IL: North Central Regional Educational Laboratory, Learning Point Associates.
- Jaffee, D. (1997). Asynchronous learning: technology and pedagogical strategy in a distance learning course. *Teaching Sociology*, 25(4), 262-77.
- Jeynes, W. (2003). *Religion, education, and academic success*. Greenwich, CT: IAP.
- Jenkins, T. P. (1998). *The performance of home schooled students in community colleges*. Doctoral Dissertation, Texas A&M. University-Commerce, 1998.
- Jonassen, D.H. (2000). *Computers as mindtools for schools: Engaging critical thinking*. Upper Saddle River, NJ: Merrill/Prentice Hall.
- Jones, P., & Gloeckner, G. (2004a). A study of home school graduates and traditional school graduates. *The Journal of College Admission*, 183, 17-20.
- Jones, P., & Gloeckner, G. (2004b). A study of admissions officers' perceptions of and attitudes toward home school students. *The Journal of College Admission*, 185, 12-19.
- Kearsly, G. (2000). *Online education: Learning and teaching in cyberspace*. Belmont, CA: Wadsworth.
- Keeter, S., Kennedy, C., Dimock, M., Best, J., & Craighill, P. (2006) Gauging the impact of growing nonresponse on estimates from a national RDD telephone survey, *Public Opinion Quarterly*, 70, 759-779.
- Kern, C. W., Fagley, N. S., and Miller, P. M. (1998). Correlates of college retention and GPA: Learning and study strategies, test-wiseness, attitudes, and ACT. *Journal of College Counseling*, 1, 26-35.

- Kunzman, R. (2008). Homeschooling and the law. In K. Lane, M. A. Gooden, J. F. Mead, P. Pauken, & S. Eckes (Eds.), *The Principal's Legal Handbook*. 189-204. Dayton, OH: Education Law Association.
- Ladyschewsky, R. (2004). E-learning compared with face to face: Differences in the academic achievement of postgraduate business students. *Australian Journal of Educational Technology*, 20 (3), 316-336.
- Lake, R., & Hill, P. (2009). *Performance management in portfolio school districts*. Seattle, WA: Center on Reinventing Public Education. Retrieved October 28, 2011, from http://www.crpe.org/cs/crpe/download/csr_files/pub_dscr_portfperf_aug09.pdf
- Lee, V. E., & Ekstrom, R. B. (1987). Student access to guidance counseling in high school. *American Educational Research Journal*, 24 (2), 287-310.
- Leeper v. Arlington Independent School District, 17-88761-85 (17th D.C. 1987).
- Likert, R. (1932). A technique for the measurement of attitudes. *Archives of Psychology*, 22(140), 1-55.
- Lines, P. (1996). Homeschooling comes of age. *Educational Leadership*, 53, 63-67.
- Lips, D., Watkins, S., & Fleming, J. (2008). *Does Spending More on Education Improve Academic Achievement?* Retrieved December 16, 2012 from <http://www.heritage.org/research/reports/2008/09/does-spending-more-on-edu>
- National Center for Education Statistics. (2012). *Digest of education statistics, 2011* (NCES 2012-001). Washington, DC: U.S. Department of Education. Retrieved December 17, 2012 from <http://nces.ed.gov/programs/digest/d11/>.
- National Center for Education Statistics. (2012). *Home schooling in the United States: 2012*. Washington, DC: U.S. Department of Education. Retrieved June 17, 2012, from

- <http://nces.ed.gov/pubs2006/2006042.pdf>.
- McDonald, J.H. (2009). *Handbook of Biological Statistics* (2nd ed.). Baltimore, Maryland: Sparky House Publishing.
- McDonough, P. M. (1997). *Choosing colleges: How social class and schools structure opportunity*. Albany, New York: State University of New York Press.
- Mertens, D. M. (2009). *Transformative research and evaluation*. New York: Guilford.
- Miles, M. B., & Huberman, A. M. (1994). *Qualitative data analysis: Expanded sourcebook* (2nd ed.). Sage Publications: Thousand Oaks, CA.
- Miron, G., & Horn, J. (2003). *Evaluation of Connecticut charter schools and the charter school initiative. Final Report*. Western Michigan University, Kalamazoo, MI.
- Nathan, J. (1996). *Charter schools: Creating hope and opportunity for American education*. San Francisco: Jossey-Bass.
- National Association of College Admission Counselors. (2011). *State of College Admissions*. Arlington, Virginia. Retrieved on 6/12/13 from <http://www.nacacnet.org/research/PublicationsResources/Marketplace/Documents/SOCA2011.pdf>
- National Association of College Admission Counselors (2012). *State of College Admissions*. Arlington, Virginia. Retrieved on 6/12/13 from <http://www.nacacnet.org/research/PublicationsResources/Marketplace/research/Pages/StateofCollegeAdmission.aspx>
- The National Center for Home Education (2006). *Home school enrollment in colleges and universities*. Retrieved on 10/25/12 from <http://www.hslda.org/docs/nche/000002/00000241.asp>
- National Alliance for Public Charter Schools. (2010). *Public Charter School Dashboard 2009-*

2010. Washington, DC: National Alliance for Public Charter Schools.
- National Charter School Research Center (2010). *Meeting the Challenge of Rural Charter School Development*. National Charter School Resource Center November 2010. E-Newsletter. Washington, DC: Author.
- National Defense Authorization Act. (2008). H.R. 1585 (112th): *National Defense Authorization Act for fiscal year 2008*. Retrieved from <http://www.govtrack.us/congress/bill.xpd?bill=h110-1585>
- Newman, A., Stein, M., & Trask, E. (2003). *What can virtual learning do for your school?* Boston, MA: Eduventures.
- No Child Left Behind (NCLB) Act of 2001, Pub. L. No. 107-110, § 115, Stat. 1425 (2002).
- O'Dwyer, L., Carey, R., & Kleiman, G. (2007). A study of the effectiveness of the Louisiana algebra I online course. *Journal of Research on Technology in Education*, 39(3), 289-306.
- O'Neil, T. (2006). *How distance education has changed teaching and the role of the instructor*. Paper presented at the 2006 E-Leader Conference.
- Osborne, D. (2012). *Improving charter school accountability: The challenge of closing failing schools*. Washington, D.C.: Progressive Policy Institute.
- Palloff, R., & Pratt, K. (1999). *Building learning communities in cyberspace: Effective strategies for the online classroom*. San Francisco: Jossey-Bass.
- Patton, Michael Q. (1990). *Qualitative Evaluation and Research Methods*, 2nd Edition. Sage Publications: Newbury Park, CA.
- Pennsylvania Association of College Admission Counselors President's Welcome. (n.d.). Retrieved 11/16/13 from <https://www.pacac.org/presidents-welcome>.

- Pennsylvania Department of Education. (n.d.). *What is a charter school*. Retrieved November, 2012 from http://www.portal.state.pa.us/portal/portal/server.pt/community/charter_schools/7356
- Pennsylvania School Board Association. (n.d.). *Cyber charter schools*. Retrieved March 10, 2013 from: https://www.psba.org/issues-advocacy/issues-research/cyber-charter-schools/PDE_recalculation_shows_more_charters_not_making_ayp.asp
- Peak Group. (2002). *Virtual schools across America: Trends in K-12 online education 2002*. Los Altos, CA: The Peak Group.
- Picciano A. G., & Seaman, J. (2007). *K–12 online learning: A survey of U.S. school district administrators*. Needham, MA: Sloan Consortium.
- Picciano A. G., & Seaman, J. (2009). *K–12 Online learning: A 2008 follow-up of the survey of U.S. School district administrators*. Needham, MA: Sloan Consortium.
- Powell, A.G. (1996). *Lessons from privilege. The American prep school tradition (1st ed.)*. Cambridge, MA: Harvard University Press.
- Powell, G. (2001). The ABCs of online course design. *Educational Technology*, 41(4): 43-47
- Preston, C., Goldring, E., Berends, M., & Cannata, M. (2012). School innovation in district context: Comparing traditional public schools and charter schools. *Economics of Education Review*, 31(2), 318-330.
- Ray, B. D. (1990). *A nationwide study of home education: Family characteristics, legal matters, and student achievement*. Salem, OR: National Home Education Research Institute.
- Ray, B. D. (2004). Homeschoolers on to College: What Research Shows Us. *Journal of College Admission*, 2004, No. 185, 5-11.
- Raywid, M. (1992). Choice Orientations, Discussions, and Prospects. In Peter Cookson, Jr. (Ed.),

- The Choice Controversy*, pp. 3-23, Newbury Park, California: Corwin Press, Inc
- Rakestraw, J. F. (1987). *An analysis of home schooling for elementary school-aged children in Alabama*. Doctoral Dissertation, University of Alabama, Tuscaloosa, Alabama, 1987.
- Richardson, S. N., & Zirkel, P. A. (1991). Home schooling law. In J. Van Galen & M. A. Pitman (Eds.), *Home Schooling: Political, Historical, and Pedagogical Perspectives* (pp.159-201). Norwood, NJ: Ablex Publishing Corporation.
- Rice, Jeff. (2006). Networks and new media. *College English*, 69(2), 127–133.
- Rodriguez, N. (1996). Predicting the academic success of Mexican American and White college students. *Hispanic Journal of Behavioral Sciences*, 18, 329–343.
- Rosenthal, R. (1994). *The handbook of research synthesis*. New York: Russell Sage Foundation.
- Rovai, A. P., & Ponton, M. K. (2005). An examination of sense of classroom community and learning among African American and Caucasian graduate students. *Journal of Asynchronous Learning Networks*, 9 (3), 75-90.
- Rudner, L. M. (1999). *Scholastic achievement and demographic characteristics of home school students in 1998*. Education Policy Analysis Archives.
- Runnels, M. K., Thomas, J. A., Lan, W.Y., & Cooper, S. (2006). Teaching courses online: A review of the research. *Review of Educational Research*, 76(1), 93-125.
- Ryan, J., & Heise, M. (2002). The political economy of school choice. *The Yale Law Journal*, 111:8, 2043-2136.
- Simmons, B.J. (1994). Classroom at home. *American School Board Journal*, 181(2), 47-49.
- Shea, C. (1996). From home to college. *The Chronicle of Higher Education*, 42 (21), A31-A32.
- Smith, N. (2005). *Texas roundup: Charter schooling in the lone star state*. Washington, DC: Progressive Policy Institute.

- Sokal, R.R., & Rohlf, F.J.. (1995). *Biometry: The principles and practice of statistics in biological research*. 3rd edition. New York: W.H. Freeman.
- Sorey, K. C., & Duggan, M. H. (2008). Differential predictors of persistence between community college adult and traditional-aged students. *Community College Journal of Research and Practice*, 32, 75-100.
- Stuit, D., & Smith, T. (2012). Teacher turnover in charter schools. *Economics of Education Review*, 31, 268-279.
- Trochim, W. (2000). *The research methods knowledge base* (2nd ed.). Cincinnati, OH: Atomic Dog Publishing.
- Tucker, B. (2007). *Laboratories of reform: Virtual high schools and innovation in public education*. Education Sector Reports. Retrieved from http://www.educationsector.org/usr_doc/Virtual_Schools.pdf.
- United States Army (2013). Benefits. *GoArmy.Com*. Retrieved October 30, 2013, from <http://www.goarmy.com/benefits/additional-incentives/home-school-graduate.html>.
- United States Department of Labor. 2011. "Counselors." of Labor Statistics Occupational Outlook Handbook, 2010–2011. Retrieved 11/14/12 from: <http://www.bls.gov/oco/ocos067.htm>.
- Visser, P. S., Krosnick, J. A., Marquette, J., & Curtin, M. (1996). Mail surveys for election forecasting? An evaluation of the Columbus Dispatch poll. *Public Opinion Quarterly*, 60, 181-227.
- Wartes, J. (1990). Recent results from the Washington homeschool research project. *Home School Researcher*, 6, 1-7.
- Watson, J., Gemin, B., & Ryan, J. (2008). *Keeping pace with K-12 online learning: A review of*

- state level policy and practice*. Naperville, IL: North Central Regional Educational Laboratory.
- Watson, J., Murin, A., Vashaw, L., Gemin, B., & Rapp, C. (2010). *Keeping pace with K-12 online learning: An annual review of policy and practice*. Retrieved September 20, 2013 from <http://kpk12.com/>
- Watson, J. F., Winograd, K., & Kalmon, S. (2004). *Keeping pace with K-12 online learning: A snapshot of state-level policy and practice*. Naperville, IL: Learning Point Associates.
- Witte, J. (1999). *The Market Approach to Education: An Analysis of America's First Voucher Program*, Princeton, New Jersey: The Princeton University Press.
- Wood, M. (1992). Is governing board behavior cyclical?. *Non-Profit Management and Leadership*, 3, 2, 139-163.
- Zar, J.H. (1999). *Biostatistical analysis* (4th ed.). Upper Saddle River, NJ: Prentice Hall.
- Zelman v. Simmons-Harris*, 6 U.S. 639 (2002).
- Zimmer, R., Gill, B., Booker, K., Lavertu, S., Sass, T., & Witte, J. (2009). *Charter Schools in Eight States: Effects on Achievement, Attainment, Integration, and Competition*. RAND: MG-869.
- Zimmer, R., Gill, B., Razquin, P., Booker, K., & Lockwood, J. R. III. (2007). *State and local implementation of the No Child Left Behind Act: Volume I-Title I school choice, supplemental educational services, and student achievement*. Washington DC: U.S. Department of Education, Office of Planning, Evaluation and Development, Policy and Program Studies Service.
- Zirkel, P.A. (1997). Special education law update. *V. West's Education Law Reporter* , 116 , 1–8.